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Facilities Engineering

Directorate of Public Works Resource Management System

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SUMMARY of CHANGE

DA PAM 420-06

Directorate of Public Works Resource Management System

This revision--

- o Changes the name of the Facilities Engineer to the Directorate of Public Works.
- o Introduces the concept of the business management plan.
- o Addresses the new concept of the Installation Status Report.
- o Adds guidance on work management in AMC (chap 3)
- o Adds guidance on Army housing work management (chap 4)
- o Adds guidance on contracted DPW operations (chap 6)
- o Adds guidance on environmental management (chap 7)
- o Adds guidance on warranty management (chap 8)
- o Adds the Directorate of Public Works Annual Awards Program(chap 9).
- o Updates guidance for resource planning, work processing, and financial management to address the trends towards increased use of automation, an emphasis on business and customer-oriented management, a streamlining of work management, and the growth in the number of reimbursable customers.

Facilities Engineering

Directorate of Public Works Resource Management System

By Order of the Secretary of the Army:

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History. This UPDATE printing publishes a revision of this publication. Extensive changes have been made and the structure of the revised text has been reorganized. This pamphlet was issued on 15 May 1978. This publication has been reorganized to make it compatible with the Army electronic publishing database. No content has been changed.

Summary. This pamphlet provides guidance to the Directorate of Public Works on managing resources. Procedures are explained to

promote a uniform system of managing work, accounting for resources, and conducting review and analysis of public works operations.

Applicability. This pamphlet applies to the Active Army and the U.S. Army Reserve. It applies to installations and activities in active use by the regular Army, in an inactive or standby condition for future use by the regular Army, in an excess category, and in full-time or intermittent use by the U.S. Army Reserve or Reserve Officers' Training Corps. This pamphlet does not apply to the Army National Guard and installations and activities, or parts thereof, which have been licensed to the District of Columbia or to any State, territory, or commonwealth of the United States for use by the National Guard; single project, owned or leased, civil works facilities of the U.S. Army Corps of Engineers; national cemeteries; facilities occupied by Army activities as tenants when support is provided by another government agency; and Government-owned, contractor-operated industrial plants or activities.

Proponent and exception authority.

The proponent of this pamphlet is the Assistant Chief of Staff for Installation Management. The proponent has authority to approve exceptions to this pamphlet that are consistent with controlling law and regulation. Proponents may delegate this authority, in writing, to a division chief under their supervision within the proponent agency who holds the grade of colonel or the civilian equivalent.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to ATTN DAIM-FDFM, ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT, 600 ARMY PENTAGON, WASH DC 20310-0600.

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Chapter 1 Introduction

1-1. Purpose

AR 420-10 provides the management principles for the Directorate of Public Works (DPW). This pamphlet provides the DPW with a facilities and resource management process for effective operation and maintenance of real property facilities and utilities.

1-2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Abbreviations and terms

Abbreviations and special terms used in this pamphlet are explained in the glossary.

1-4. Concept

DPW operations are diverse and complex and require management, engineering, and craft skills. The DPW copes with daily requirements, long range requirements, and emergencies that may exceed available resources. The DPW needs a facilities management system to collecting current, accurate information to make decisions; identify problems; and manage, control, and expedite work. The DPW can then maximize productivity, minimize reimbursement rates, and make effective use of available resources. The challenges of DPW operations can be met through comprehensive planning, programming, financial management, and program review and analysis. The Integrated Facilities System - Mini/Micro (IFS-M) captures most of the data needed for the DPW to operate effectively. Where IFS-M is not deployed, a commercial off the shelf (COTS) management information system can be used to collect and compile data. The facilities management system and DPW considerations presented in this pamphlet are described generically to allow DPW managers to tailor their operations to meet the mission and operating parameters at their installations.

1-5. Command Support

DPW management support is essential. The components of the facilities management system are integrated. DPW managers and personnel must work together to keep a smooth flow of work through the DPW. Managers must understand not only the functions of their component but also the functions of all the other components how they are related.

Chapter 2 Resource Planning and Management

2-1. The Planning Process

Planning is a logical process that translates an idea or objective into reality. DOD uses the Planning, Programming, and Budgeting System (PPBS) for that process. The Army's resource management system parallels the DOD PPBS, but adds the program execution function and calls it the Planning, Programming, Budgeting, and Execution System (PPBES).

2-2. Planning, Programming, Budgeting, and Execution System

The details of financial management are in AR 1-1 and DFAS-IN 37-1. The functions of the PPBES, as they apply to DPWs and DPW customers, are described below:

a. Planning. Planning is the development of broad strategies and objectives to meet an organization's mission. It is a long-range look at requirements based upon knowledge of assets, mission changes, results of inspections and studies, and policy changes. Successful planning takes coordination among the DPW divisions and branches to ensure that customer requirements are met. DPW customers establish their own facilities plans with the DPW playing a role in the process. The result is a set of long-range facilities management

goals and objectives. DPW planning is influenced by much broader planning at the Army level. For example, The Army Plan (TAP) addresses plans for revitalization of the Army infrastructure and housing.

b. Programming. Programming translates planning strategies and goals into concrete alternatives. The DPW identifies specific actions to achieve the desired goals and objectives to meet customer requirements. Actions are evaluated for their relative priorities, their value added, and their likely impact on DPW resources. They are then aligned in a logical, time-phased sequence of accomplishment known as a program. Project scopes are developed, tentative performance schedules are established, and actions needed to achieve objectives are identified. A schedule is developed to show when funds are needed. A good program addresses not only operation, maintenance, repair, and construction requirements, but also related needs such as staffing, training, studies, tools and equipment, technical data, computer support, furniture, and supplies.

c. Budgeting. Budgeting consists of estimating cost and justifying funds needed to implement the programs formulated from long-range plans. DPW branches submit cost estimates for DPW programs to their financial manager at two critical stages.

(1) Funding requests must be made at least two years ahead of the target fiscal year. This stage represents the only chance a DPW has to justify an increase in the funds it normally receives from the Major Command (MACOM) to satisfy the installation's requirements.

(2) The second stage is distribution of funds via the Budget Estimate Submission (BES), which is addressed later in this chapter. The financial manager organizes DPW estimates into a formal budget using guidance provided by various levels in the chain of command. Since this guidance reflects the expected appropriations, it usually mandates the maximum amounts that can be requested for the various programs. This stage of the budgeting process may involve additional tradeoffs and hard choices. DPW reimbursable customers must similarly budget for their RPMA requirements. Although the DPW provides the cost estimates for work on customer facilities, the customer must justify the need and defend their RPMA budget line items in their own submission.

d. Execution. After funds are allocated, money is obligated and disbursed throughout the year. Close monitoring of the status of the various DPW accounts is required throughout the fiscal year and is especially needed during periods of austere funding when RPMA funds may be reallocated to higher installation priorities. Good planning, programming, and budgeting can help the DPW minimize losing funds during the fiscal year by obligating and expending funds early. Reallocation of funds takes place during the fiscal year as priorities change, new requirements arise, and reimbursable customers adjust their RPMA programs to accommodate inadequate or delayed funding.

2-3. DPW Planning and Programming Documents

DPW planning and programming documents consist of a wide range of plans covering energy, environment, natural resources, historic preservation, mobilization, and stationing. They define the work to be performed both in-house and by contract. The plans discussed below are used to manage DPW resources.

a. Installation Real Property Master Plan (RPMP). The Real Property Master Plan is discussed in detail in AR 210-20. It is a series of documents presenting in graphic, narrative, and tabular form the existing installation assets and a 20-year projection for orderly and comprehensive installation development. The Real Property Master Plan provides a framework to manage property resources, coordinate development with local communities, guide construction and acquisition programs, manage facilities use, and plan installation real property maintenance activities. It serves as the foundation for various programs including:

- Military Construction, Army (MCA),
- Non Appropriated Funds (NAF),

- Defense Business Operations Fund (DBOF),
- Operations and Maintenance, Army (OMA),
- Army and Air Force Exchange Services (AAFES),
- Defense Commissary Agency (DeCA),
- Army Family Housing (AFH), and
- Research, Development, Testing and Evaluation (RDT&E).
- Operations and Maintenance, Defense (OMD).

b. Installation Status Report (ISR). The Installation Status Report provides a timely single source document for assessing key elements of an installation's status. When fully developed, the ISR will consist of three parts:

(1) Part I (Infrastructure). Part I uses Army-wide standards to assess the condition of facilities, and identifies the degree of sub-standard or unavailable facilities that impact on installation readiness. It identifies installation facility renovation, sustainment, and construction requirements and provides costs. This part will help focus the Army's future infrastructure investment.

(2) Part II (Environment). Currently implemented in CONUS and the Reserve Command, Part II assess the management and tracks the cost of such programs as energy conservation, solid waste reduction, recycling, underground storage tank management, drinking water management, lead-based paint abatement, and other installation environmental programs.

(3) Part III (Services). Now in conceptual development and prototype testing, Part III will address all Base Operations (BASOPS) services.

c. Resource Management Plan (RMP). The RMP is a comprehensive and integrated plan that sets forth DPW initiatives, objectives, and actions for a six year period. The RMP is a projection of the DPW's customer needs and a statement of the strategies the DPW will use to meet them. The Long-Range Work Plan (LRWP) is the Army Family Housing portion of the RMP. The RMP establishes a think-ahead mind set throughout the DPW and is the basis for budgeting, scheduling work, and evaluating DPW performance.

(1) Content. Although each DPW tailors the RMP format and content to its particular needs, there are some elements that should be included.

(a) Resource Information. The RMP records resource information that includes the DPW Table of Distribution and Allowance (TDA), DPW training program, and a summary of ongoing or projected personnel actions.

(b) Long-Range Goals and Objectives. The long-range goals and objectives portion of the RMP is the basis of the DPW business planning process. Goals and objectives identified in the RMP are the result of coordinated effort by the installation commander, the DPW, and its customers. Some of the goals are the result of outside mandates such as environmental legislation and DA or MACOM policies. Other goals are based on the vision of the installation commander.

(c) DPW Programs. The details on how to achieve DPW goals and objectives are established in the DPW programs. For each program, specific line items of work or other actions are listed along with the strategy, time phasing, and approximate cost to achieve them. If future requirements are nebulous, their identification in a formal, documented form ensures they remain in consideration until further information or guidance dictates otherwise. Examples include the following:

- Major maintenance, repair, and minor construction programs using appropriated funds,
- AFH programs,
- NAF programs,
- Special interest programs (for example, Occupational and Safety Health Act and Army Communities of Excellence programs),
- MCA programs,
- Troop construction programs, and
- Equipment and furnishings acquisition programs.

(d) *Annual Work Plan (AWP).* The AWP is derived from the budget fiscal year portion of the RMP. It is the detailed expansion of the programs to enable their execution in the upcoming fiscal year. DPWs should accomplish the AWP via Quarterly Work Schedules (QWSs). These are planned 90 days in advance of execution with even more details and firmer estimates. Although some requirements such as summer overhauls and utility levels are fairly predictable a year in advance, others such as minor construction and travel are difficult to forecast beyond the next quarter. The QWS provides the means to manage both the fixed and variable workloads.

- Fixed Workload. These are essential services, projects, and tasks the DPW must perform to ensure DPW customers can accomplish their missions with no appreciable degradation of their physical plants. Fixed workload includes utility costs, recurring work, and essential requirements such as leases, equipment maintenance contracts, and refuse disposal.
- Variable Workload. This is the balance of work over and above the essential fixed workload that the DPW should accomplish if funds permit. Since variable workload is subject to funding and priority changes, it must be well managed to minimize disruptions to DPW operations.

(e) Identification of fixed and variable projections usually begins in the second quarter of the budget year to coincide with BES development. The AWP process is therefore a 21-month cycle (9 months to develop and 12 months to execute beginning with development of the preliminary AWP (usually in early January of the budget year) and ending on 30 September of the execution year. As one AWP is being executed, the next is under development.

(2) The typical AWP development sequence is as follows:

- DPW management reviews the RMP or DPW Business Plan and current AWP to determine preliminary objectives for the new AWP (second quarter, budget year).
- On the basis of new customer requirements and information, ISR input, and feedback from the current AWP, all divisions update and validate utilities, services, and recurring work requirements (second quarter, budget year).
- DPW program managers update and validate their program documentation (second quarter, budget year).
- MACOM forwards budget guidance to installation (second quarter, budget year).
- Engineering Resource Management Division (ERMD) or Business Management Division (BMD), consolidates input and develops a preliminary AWP for DPW Director and the Installation Commander to approve (second quarter, budget year).
- Budget Office develops BES or other budget document based on DPW approved preliminary AWP (second quarter, budget year).
- BES is forwarded for MACOM review (second quarter, budget year).
- Review and completion of the program priorities by the Installation Planning Board (IPB) or its equivalent (third and fourth quarters, budget year).
- ERMD or BMD plans and inserts first QWS into the new AWP (fourth quarter, budget year).
- MACOM provides final budget guidance (fourth quarter, budget year).
- New AWP is completed on the basis of new budget guidance, IPB results, evaluation of current AWP, and additional customer information received (fourth quarter, budget year).
- Installation commander approves financed AWP (fourth quarter, budget year).
- New AWP is implemented (first quarter, execution year).
- Review and analysis of previous AWP continues and review and analysis of new AWP begins (first quarter, execution year).

- The AWP is continually revised and updated on the basis of unprogrammed but essential requirements, changed priorities, and adjustments in funding posture (execution year).
- Major displaced work in AWP is re-programmed within the RMP(execution year).
- Results of previous year AWP review and analysis are incorporated as actions into current year AWP.

d. DPW Business Plan (DBP). A growing number of DPWs are using the term DPW Business Plan instead of RMP. A DBP includes all of the elements of the RMP, but the DBP looks at the DPW planning environment from a business perspective by adding a marketing plan. A business approach to DPW planning is becoming essential as more DPW funding comes from reimbursable customers. DPWs must find ways to offer premium services at competitive prices. The DPW should know and understand its market by conducting an annual market analysis and incorporating the results in the DBP. A market analysis provides the DPW with a knowledge of its customer base and the reimbursable customers within it. Other aspects of the DBP include customer history of spending on facilities and projections for future spending; special needs; and the customer assets by square footage, acreage, and population.

2-4. DPW Program Management

DPW funds are requested, budgeted, allocated, received, and disbursed by means of several accounts. These accounts are located within several of the Army Budget Program Elements.

a. DPW RPMA and Non-RPMA Fund Accounts

(1) Base Operations Accounts. The DPW is primarily interested in seven base operation budget accounts. Four of these accounts are usually referred to by their Functional Account Extension Code from the Army Management Structure Code (AMSCO). The types and classes of work and the work documents normally used to order work under these accounts are discussed in greater detail in chapter 3. The others are associated with environmental programs.

(a) Operations of Utilities (J Account). Programmed locally for the operation of utilities plants and systems and for the purchase of utilities. It is the most inflexible of the Base Operations Accounts paying the utility bills and the work force necessary to operate the installation's utilities systems.

(b) Maintenance and Repair of Real Property (K Account). Programmed locally to accomplish maintenance and repair of real property Annual Recurring Requirements (ARR) and to accomplish one-time projects.

(c) Minor Construction (L Account). Programmed locally to accomplish minor construction requirements identified in the Annual Work Plan (AWP). The account includes "new work" projects such as construction of building, additions, expansions, alterations, conversions, and relocations. Project cost limitation is \$300,000 or \$1,000,000 if the project is intended solely to correct a deficiency that threatens the life, health, or safety of personnel.

(d) Municipal Services (M Account). Programmed locally for all other engineering support requirements at the installation as specified in the AWP. This account consists of service contracts and the in-house management and engineering work force. It provides the following:

- Fire prevention and protection,
- Refuse collection and disposal,
- Pest control,
- Custodial services,
- Snow and ice removal,
- Management and engineering,
- Miscellaneous engineering, and
- Demolition of Real Property

(e) Environmental Compliance (PE XXXX56 Account). This consists of civilian and military manpower and associated costs and

resources to support the Environmental Compliance Achievement Program (ECAP).

(f) Environmental Conservation (PEXXX53).

(g) Pollution Prevention (PEXXX54).

(2) Non-RPMA Accounts. The DPW is responsible for three accounts indirectly related to RPMA.

(a) General Services Administration (GSA) and Recruiting Leases (A Account). Pays for leases established through the GSA and Recruiting Leases.

(b) Unaccompanied Personnel Housing Furnishings and Administration (H Account). Buys furnishings for installation unaccompanied personnel housing facilities, pays the salaries of the unaccompanied personnel housing staff, and funds other related requirements.

(c) Army Family Housing Accounts, which include operations (P1910), maintenance including repair and incidental improvements (P1920), utilities (P1930), and leased housing (P1940).

(3) Real property maintenance at Army Materiel Command (AM-C) installations is only minimally supported by OMA funds. These installations' RPMA is funded from the following sources.

(a) Defense Business Operating Fund (DBOF). The DBOF is authorized by 10 U.S.C. 2208 to provide working capital for the operations and maintenance of Army depots and arsenals. This revolving fund is replenished through fixed rates applied to the services provided to the users. The rates are based on parameters such as labor shop hours used and are set at levels meant to recover all operation and maintenance costs.

(b) Procurement, Army (PA) Appropriation. The PA appropriation supports major production, procurement, and overhaul of Army hardware and munitions and is used to support Government Owned Contractor Operated (GOCO) installations. The RPMA requirements at PA-funded sites are considered an integral part of the production process; therefore RPMA is included as a contract specification. More details on PA funding can be found in AR 700-90.

(c) Research, Development, Test, and Evaluation (RDT&E) Appropriation. RDT&E funds support scientific research, development, test and evaluation. AMC installations whose mission is supported by RDT&E may fund all RPMA requirements with the RDT&E appropriations accounts. There are strict limits on the use of RDT&E to fund non-mission, community support projects. More details on RDT&E can be found in AR 70-6.

b. Budget Formulation. The first activity of DPW program management is budget formulation, which is the process of expressing installation programs in terms of required resources. DPW program management is focused primarily in the engineering part of the budget. Using the RPMA accounts to identify resources, the engineering part of the budget identifies the in-house and contract work and the equipment to be procured; lists the sources of funds, and identifies the work to be accomplished. The budget-related products used or produced during budget formulation are the Annual Work Plan (AWP) and the Budget Estimate Submission (BES).

(1) The installation BES consists of fiscal schedules and detailed obligations, costs, and manpower justifications for installation programs for the current fiscal year, the budget year, and the program year. The BES is submitted on a two-year cycle, but a modified budget estimate is usually required on the off-cycle year since Congress still appropriates most funds annually. Information for the BES comes from the DPW Business Plan or Resource Management Plan and the AWP. The resources requested in the BES mirror the levels established as a result of decisions in the DOD PPBS and Army PPBES. Although, at this stage, the size of the DOD budget has already been determined, the BES is the vehicle by which the available funds are distributed among the installations. It is, therefore, imperative that the DPW submit a quality product during the BES process to ensure that the DPW gets its fair share of available funds. In addition to providing the engineering submittal to the installation BES, the DPW reviews the preliminary BES for compliance with MACOM guidance, revises it as necessary, and submits a recommended BES to the installation commander. Upon approval by the installation commander, the installation BES is submitted to the MACOM for inclusion in its BES submittal to the HQDA.

(2) The Program Budget Advisory Committee (PBAC) is an installation-level committee supporting and advising the installation commander and higher echelons on financial and other resource allocation matters. It can develop, review, and recommend courses of action on all installation activities. The DPW should serve as a voting member of the PBAC to defend and justify DPW funds. The members call upon the DPW to estimate the impact of funding adjustments and to provide estimates, forecasts, and analyses involving the DPW mission. The housing manager may be a non-voting member of the PBAC who participates in PBAC actions that involve housing funds. The duties of the PBAC are as follows:

(a) Conflict Resolution. The PBAC resolves financial and resource allocation conflicts and recommends solutions to the installation commander. Budget manpower guidance is established incorporating major installation activity directors' recommendations, and an installation Budget Manpower Guide (BMG) is generated for distribution to the directors. The major activity directors use the BMG as the basis for preparing their parts of the installation BES.

(b) BES Review. After the individual parts of the BES are completed and integrated by the installation Resource Manager into a preliminary BES, the PBAC reviews it to ensure compliance with the BMG, to resolve differences, to make necessary adjustments, and to provide a recommended BES to the commander.

(c) Budget Adjustments. During the course of the fiscal year, minor financial and resource allocation problems that arise during budget execution are reviewed. The problems are either resolved or referred to the commander with recommendations for corrective actions. Similarly, as re-programming or strategy changes are mandated by higher headquarters, the PBAC acts as the review and resolution agency for the installation. The PBAC records all of these actions to ensure an audit trail is available for future review and analysis.

c. Budget Execution. Once the budget is formulated and approved, the DPW is responsible for executing it. The DPW must ensure that the objectives of the planned programs are met and that an audit trail is established to support the review and analysis. This process is called budget execution and is the second major financial activity in DPW program management. Execution begins with the first quarterly receipt of funds at the installation and continues with the subsequent issuance of DPW budgetary allowances, especially year-end funding. DPW objectives for budget execution include the control of funds and control of costs.

(1) Objectives for Controlling Funds. The most important objective for controlling funds is to have sufficient funds available to cover obligations. The DPW must continually monitor the balances of available funds and certify their sufficiency. A significant portion of DPW services are provided to individuals, activities, and tenant organizations on a reimbursable basis. The authority to provide this support is included as part of the installation Funding Authorization Document (FAD). Thus, the DPW has several sources of funds that must be monitored to avoid over-obligation. This requires maintaining direct communications with the installation finance and accounting officer to verify the dates and amounts of disbursements accurately.

(a) Unliquidated Obligations. Unliquidated obligations are obligations incurred as a result of the issuance of supply items by the stock fund or the ordering of services and execution of projects for which payment has not been made. The DPW must know and be able to verify their status.

(b) Proper Funds Identification. The DPW must also monitor the use of funds to ensure that both direct obligation funds and reimbursement funds are properly disbursed. Direct funded moneys are authorized for mission-related activities and base services and can be obligated immediately following quarterly authorization. Funded reimbursement moneys (targeted for specified activities) are also authorized quarterly or transferred from the requesting agency; however, they are placed in a reserve account pending receipt of a disbursement order. These moneys must be accounted for separately to avoid the possibility of over-obligation or improper obligation.

(2) Cost Control Objectives. The objectives of a cost control

system are to provide an accurate status of expenditures, provide early warning of problems, improve final cost estimates, control changes to the baseline program, and provide formal audit trails for review and analysis.

2-5. Automated Information Support for Program Management

Several automated information systems are available to assist in DPW program management. They provide the financial information that the DPW requires to function day to day and to formulate and execute the budget properly. Some of the systems available to the DPW are as follows:

a. Integrated Facilities System - Mini/Micro (IFS-M). The Installation Real Property Inventory (RPI) is the basis of the IFS-M database. The accuracy of the RPI is crucial to the effectiveness of the IFS-M modules. The job cost accounting functional area of IFS-M provides facility-related and budget-related information on all aspects of DPW activities. It ensures that RPMA costs are collected, funding limits are maintained at the installation level, and user-furnished funds are tracked. IFS-M produces all the DPW's standard financial accounting reports and offers report format flexibility. IFS-M interfaces with the Standard Army Finance System (STANFINS) and other standard financial systems. IFS-M passes Type Action (TA) 20 transactions that contain information on cost, labor hours, equipment rental, and shop stock, by Account Processing Code (APC) and Element of Resource (EOR). After labor and equipment transactions have been entered into IFS-M and the end-of-day process has derived APCs and EORs for the transactions, a STANFINS interface file can be created. This file is transmitted either electronically or by magnetic medium through the Directorate of Information Management (DOIM) to the STANFINS processing site. Other DPW costs (purchased utilities, contracts, supplies, etc.) do not pass through the direct IFS-M/STANFINS interface. They may be entered directly into STANFINS, or may pass through other systems such as the Defense Commitment Accounting System (DCAS) and STARFIARS. All RPMA costs must be entered into IFS-M. These include in-house, contract, credit card purchases and utilities.

b. Standard Army Finance System (STANFINS). STANFINS standardizes and automates the financial transactions and major operating elements of finance and accounting for the entire installation. It creates and maintains an official standardized financial database, prepares reports, and supports the implementation of regulatory requirements. IFS-M labor, equipment rental, shop stock, and Commercial Activity contract costs are transferred electronically and directly to STANFINS. Other contract and travel costs must be entered into STANFINS manually. Two of the Army Materiel Command's (AMC) unique financial accounting systems, called Standard OMA Requirements System (SOMARS) and Standard Industrial Financial System (SIFS), do not interface with STANFINS.

c. Standard Depot System (SDS). The SDS does for AMC what STANFINS does for the other MACOMs. It is used by most AMC installations (except the Test and Evaluation Command (TECOM)) to apply actual DPW labor hours and costs to the Job Order/Program Control Number (JO/PCN). An Interface or bridge has been developed between SDS and IFS-M to ensure that regulatory dollar limitations are adhered to in the accomplishment of work. It also ensures that the DPW receives full reimbursement for work accomplished. The two-way interface distributes the units, hours, dollars, and other data pertinent to the DPW that are generated in SDS against the applicable Service Order or Work Phase in IFS-M. Shop stock material and equipment rental charges to individual Service Order/Work Phases in IFS-M are summarized by Work Center and JO/PCN and passed to SDS.

d. Test and Evaluation Army Management—Uniformity Program (TEAM-UP). TEAM-UP is the financial system used by TECOM activities and does for TECOM what SDS does for other AMC installations. There is a TEAM-UP interface between TEAM-UP and IFS-M that allows costs to be fed from TEAM-UP into IFS-M against individual Service Orders and Work Phases.

e. Standard Army Automated Contracting System

(SAACONS).SAACONS is used by contracting personnel to monitor and track contract related costs. There is an interface between SAACONS and IFS-M.

f. Standard Army Financial Inventory Accounting and Reporting System (STARFIARS). STARFIARS is used in the Continental United States (CONUS) to provide general ledger accounting data for materials. It passes DPW material dollars to appropriate STAN-FINS accounts.

2-6. Other Resources

The DPW must practice aggressive financial management, despite working within the rigid financial procedures, restrictions, limitations, and formal reviews addressed in this chapter. This is especially true during times of austere funding. An aggressive approach requires well-documented justifications, adequate defenses of budget requests, and a thorough knowledge of the system and of the various fund sources available. Examples of these funds sources follow:

a. Defense Environmental Restoration Account (DERA). About \$500 million each year is set aside by the DOD to clean up environmental hazards. If the DPW is faced with a sudden environmental expense, such as that posed by a leaking underground tank, the cleanup cost may be paid for by DERA.

b. Energy Saving Performance Contracts (ESPC). ESPC is a contracting method whereby the contractor incurs the costs of implementing energy saving measures. Those costs may include energy audits, acquisition and installation of equipment, and personnel training. The contractor is paid from the cost saved from the energy saving measures implemented during the term of the contract.

c. Host Nation Support. Many overseas installations fall under host-nation agreements that can authorize funds for the DPW mission. The DPW should become aware of those programs and determine how aggressively the funds are being pursued.

d. Awards. Some Army and MACOM awards include funds that an installation can use for its RPMA program. The Army Communities of Excellence awards, for example, provide funds for use at the winner's discretion.

e. Non-Appropriated Funds (NAF). Congress requires most Morale, Welfare, and Recreation (MWR) functions to be financially self-supporting. This means that much of the utility cost and facility maintenance support is paid for by NAF. The DPW should ensure that a thorough study is conducted to identify all of the NAF items that should not be funded from the DPW budget.

f. Year-End Funds. Although not strictly a separate source of funds, year-end funds may be offered to the DPW. They should not be taken for granted since they may go toward personnel costs, MWR programs, or other installation requirements. However, a wise DPW designs projects subject to the availability of funds (SAF) and has them ready for funding, just in case. The use of SAF funds must be in accordance with Federal Acquisition Regulation (FAR) Subpart 32.7 and Clause 52.232-18 so that they can be funded either during year-end funding or with the first available funds during the first quarter of the next fiscal year.

g. Energy Conservation Investment Program (ECIP). ECIP is an MCA appropriation for energy conservation projects. Proposed projects compete for these funds which are managed at the DA level. Projects are rated according to their energy savings-to-investment ratios. A portion of savings from completed ECIP projects may remain at the installation for reinvestment in energy conservation programs or at the commander's discretion.

h. Production Base Modernization (PBM). PBM provides funding for modernizing production-type facilities and equipment and for depot maintenance plant equipment needed to support new weapon systems (AR 700-90).

i. Reimbursements. Reimbursements from reimbursable customers are a routine source of funds. Much of the DPW's funding comes from reimbursements from customers directly billed for DPW services. Reimbursable customers are more likely to challenge the cost and need for DPW work. Many DPWs are, therefore,

reexamining the accuracy of their cost estimates and the accountability of their reimbursement accounting procedures. DODI 4001.19 provides guidance on billing reimbursable customers. Each DPW should structure a system suitable for the reimbursable customers. Those systems usually follow these general concepts:

(1) Standing Agreement with Each Reimbursable Customer. The DPW enters into a formal agreement with each of its bilabial customers defining what services are to be reimbursable and how the transfer of funds is to be made. Installations use an Installation Support Agreement (ISA) to specify what services the DPW is to provide and a more informal Memorandum of Understanding (MOU) for a specific item of work. Funds are transferred by a Military Interdepartmental Purchase Request (MIPR). A customer can issue MIPRs monthly, quarterly, or other period, or it can issue them on a per project basis, depending on the customer's desires.

(2) Work Identification. The reimbursable customer identifies the facilities work needed. That identification may take place within the ISA, described above, or by another means unique to a particular customer. Tenants from other federal agencies, for example, usually have their own ways of identifying the work they want done.

(3) Cost Estimates. The DPW estimates the cost of the work identified by the reimbursable customer. Cost estimates for work not yet approved are usually "desk top" or informal estimates. However, for reimbursable customers the initial estimate may be all that a customer is willing to pay once the work is approved and funded. The DPW must therefore adapt its normal scoping estimate procedures to meet the customer's need for accuracy in the estimates prepared. The customer has the option to accept or reject the DPW's estimate. Increasingly, reimbursable customers are allowed to contract for the work directly instead of using DPW services, which puts the DPW under pressure to give competitive estimates.

(4) Funds Procurement. Funds for high-cost work are programmed and budgeted for within each customer's chain of command. Customers must justify and defend their budgets in much the same way that the DPW does for the direct funded work. DPWs need to assist their reimbursable customers to define and justify their large projects. For smaller projects and routine work, the DPW usually bills the customer monthly, and the customer pays for them out of its annual operating budget.

Chapter 3 Work Management System

3-1. Introduction

The DPW must have a work management system to control and manage work. All work, whether accomplished in-house or by contract, must be documented. The components of a good system are as follows:

- Work generation
- Customer service
- Work reception
- Work planning
- Work coordination
- Work estimating
- Material coordination
- Work scheduling
- Work accomplishment
- Work evaluation

3-2. DPW Work Flow

The flow of work is illustrated in figure 3-1. Note that work planning is not shown on the chart since it is involved more with development of the annual work plan rather than day-to-day planning of work. Customer support is not shown since applies to many of the functions represented. This flow chart and functional breakdown follows the Standard Operating Procedures (SOPs) developed

by the U.S. Army Corps of Engineers Center for Public Works (CPW) as shown in table 3-1 below. These SOPs can be retrieved from the CPW Home Page on the World Wide Web.

Table 3-1
Directorate of Public Works SOPs

Functional Component	Standard Operating Procedure
Customer Service	DPW-ERM-01-XX
Work Reception	DPW-ERM-02-XX
Work Coordination	DPW-ERM-03-XX
Work Estimating	DPW-ERM-04-XX
Material Coordination	DPW-SUP-05-XX
Work Scheduling	DPW-ERM-06-XX
Work Accomplishment	DPW-ERM-07-XX
Work Evaluation	DPW-ERM-08-XX

3-3. Workload Data

DPWs must have a mechanism for collecting and manipulating the data. Many DPWs operate the Integrated Facilities System—Micro/Mini (IFS-M) as its automated management information system. Other DPWs use software programs developed in-house or commercial off-the-shelf (COTS) software. At small activities, manual systems made up of record logs are still used. Regardless of the data management system, effective and efficient operations require all work be assigned a work class and work document type.

a. Work Class. Work class designations are based on the funding accounts and audit trail required. Table 3-2 identifies the four work classes and the work documents typically used with each class.

b. Work Document Type. Two standard Department of Army (DA) forms are used to record work requirements. They are DA Form 4287 (Service Order) and DA Form 4283 (Facilities Engineering Work Request). The DA Form 4287 is used to request and to execute service order type work. Work is authorized and executed using either a DA Form 4284 (Facilities Engineering Work Order) (if the work is to be accomplished in-house), or on DA Form 4286 (Facilities Engineering Contract Data Form) (if the work is to be performed by contract). To record work data, six work document types are used. In developing the Work Request job number, the work document type is shown as the last digit in the job number. In the case of Service Orders, the form itself designates the work document type.

Table 3-2
Work Class

Work Class	Work Document Type
J Operation of Utilities	S Standing Operations Order
K Maintenance and Repair of Real Property	R Service Order
	J Individual Job Order
	M Preventive Maintenance
	B Shop Stock
L Minor Construction	J Individual Job Order
	P Special Project
M Municipal Services (includes fire prevention & protection, refuse handling, pest control services, custodial services, snow/sand removal & ice alleviation, management and engineering, engineer support, and miscellaneous engineering activities)	S Standing Operations Order
	R Service Order
	J Individual Job Order
	M Preventive Maintenance

(1) Service Order. A Service Order (SO) is used for small minor maintenance and repair jobs and for emergency work such as broken plumbing or electrical failures. They represent the least controllable

and most reactive work performed by the DPW. Service Orders have the highest level of customer visibility of any work performed by the DPW. Work that cannot be predicted, planned, or scheduled is the most costly per productive hour expended. Local policy usually places a ceiling of \$2,000 on labor and materials used on a SO; however, this limitation varies greatly among DPWs. The work is requested through Work Reception by telephone, by fax, in person, or in writing. A formal SO priority system is required to ensure the most appropriate use of available resources.

(2) Individual Job Order. An Individual Job Order (IJO) is used for maintenance and repair or minor construction projects exceeding the scope of SOs. The procedures associated with an IJO allow greater management and control through estimating the labor-hour, material, and equipment requirements; screening for financial limitations and availability of funds; scheduling accomplishment of the work when resources are available; and review and analysis of completed work for proper execution and customer satisfaction.

(3) Standing Operations Order. A Standing Operations Order (SOO) is used for plant operations and operator maintenance services. A SOO supports specific work and manpower requirements that are relatively constant and predictable (for example, utilities, boiler plant operation, and watch standing). Construction, maintenance and repair work and preventive maintenance requirements (with the exception of operator PMs) are not accomplished using a SOO. When improperly used for work requirements that should fall under the classification of maintenance and repair, SOOs become blank checks. Managers are unable to clearly identify the work performed and the amount of labor hours and materials used. Examples of work appropriate for accomplishment by SOO are—

(*a*) Utility Plant Operations requiring fixed crews with a specified number of operational shifts per day; also, requirements for part-time attendant operators for individual plants; and requirements for roving operators in performance of operations of utilities functions only.

(*b*) Scheduled Operator Inspections and PM services performed by operators but excluding maintenance and repair work not formally performed by operator personnel.

(*c*) Systems Operation (Water treatment plants, wells, and booster stations; sewage plants; high-pressure boiler plants; depot or market center type cold storage plants and ice-manufacturing plants; and self-help supply activities).

(*d*) Services (Staff planning, engineering, master planning, supervising, managing, and other related and administrative functions for which personnel requirements are established on a staffing pattern basis).

(*e*) Fire protection.

(*f*) Refuse Collection and Disposal (Collections per week or number of stand-alone containers).

(*g*) Pest Control Services.

(*h*) Land management and forestry services.

(*i*) Custodial Service (Visits per week).

(*j*) RPMA supply activities.

(4) Other types of maintenance and services. Examples of work not appropriate for accomplishment by SOO are maintenance and services requiring fixed crews on a continuing basis such as:

- Buildings and structures PM
- Roads and grounds maintenance
- Periodic maintenance (for example, swimming pool opening and closing or annual boiler startup/shutdown)
- Preventive maintenance on dynamic and static equipment
- Maintenance and repair work that cannot be identified and defined at the time the SOO is written

(5) Preventive Maintenance (PM). Preventive maintenance is routine, recurring work performed on real property facilities. Although it is recorded as a different work document type, PM is accomplished using IJO procedures to the extent that the documents are often referred as Annual IJOs. Requirements for inspections, recurring maintenance, and repair work for utilities systems, buildings,

grounds, railroads, surfaced areas, and other similar maintenance performed periodically throughout the year are accounted for under these Annual IJOs. The work may be accomplished against authorizing documents in one of two ways.

- Installations may establish one or more IJOs specifying the facilities to receive maintenance and the frequency with which it is to be performed. These IJOs are structured to contain like facilities, like components of facilities, or collocated facilities. They must be sufficiently detailed to permit analysis of completed work.
- Installations using IFS-M have two options for establishing PM work documents. First, establish a PM Work Order (document type M) using standard phasing techniques and Engineered Performance Standards (EPS) Preventive Maintenance and Inspection (PMI) Checkpoints. Second, establish a PM Work Order with no phases assigned and use a Labor and Equipment Utilization Un-scheduled Preventive Maintenance, CPW FORM 4288-2 (TEST) to document the PM. Using this method, IFS-M automatically establishes up to 999 phases for an M type work document using the facility and task information entered from the Labor and Equipment (L&E) card. However, to successfully use this method, the installation must have valid task codes in the system.

(6) Shop Stock. This work document type is used to account for small, low cost, routine-use items generally required for SO and PM work that are drawn from Supply in larger quantities than are required for an individual SO (e.g., nuts, bolts, screws, washers, wire, and solder). These items are charged against a single document, and the costs are distributed across all Service Order work.

(7) Special Projects. Special projects are IJOs in which the DPW has a special interest based on locally established criteria. The designation provides a means for easier data retrieval and tracking. Criteria may include cost, special interest of the installation commander, and high visibility.

3-4. Components of Work Management System

a. Work Generation. DPW work is generated by the continuing requirements for utilities and their related services; by normal changes in the physical condition of the real property from age, environment, and use; by changes in regulatory requirements (for example, environmental laws); and by requirements for construction (including alteration) of facilities for increased economy and efficiency or to meet the installation's mission and operational needs. Work requirements originate with:

(1) DPW Customers. DPW customers request work on the interior of the facilities they occupy based on special requirements for equipment, interior modification, or other factors. They may occasionally request work outside of their facilities even though it is not strictly their responsibility.

(2) DPW Staff. DPW personnel generate work based on knowing the requirements and programs, from working on the facilities and equipment and identifying deficiencies that require repair, and from observing their surroundings as they move about the installation.

(3) Command Decisions. Command decisions and guidance may result in the generation of planned and unplanned work requirements (e.g., changes of command, base picnics, and special events).

(4) Inspections. Inspections include those for fire, safety, security, facilities condition, equipment operator, ISRs, environmental, and family housing. Inspections identify deficiencies that will be translated to work requirements.

(5) Preventive Maintenance Programs. Preventive maintenance (PM) inspections of facilities, systems, and equipment enable the DPW to be a proactive rather than a reactive organization. By identifying problems and planning, programming, and budgeting for their correction, the DPW maintains control of the work being performed on the installation. Effective PM results in fewer Service Orders and fewer customer-generated requests for routine maintenance and repair.

(6) Automated Engineered Management Systems (EMS). Programs such as PAVER and ROOFER enable the DPW to assess the condition of facilities and to develop a comprehensive program to maximize the efficiency and service life of available resources.

b. Customer Service. The Customer Service function is typically an ERMD/BMD responsibility. The function may be fragmented throughout the organization with various branches and offices having portions of the Customer Service responsibility. Regardless of where it is organizationally located, Customer Service should serve as the initial DPW point of contact for DPW customer questions or concerns. It should provide services that enhance DPW customer satisfaction and identify processes and procedures that enhance customer or detract from customer satisfaction. Specific duties inherent in the function include:

- Acting as the DPW liaison to its customers. In this capacity Customer Service personnel provide a point of contact within the DPW to answer questions about and determine the status of the customer's work; coordinate customer requirements with other DPW divisions and sections; and make appointments with customers for preventive maintenance and Work Order visits to minimize disruption of normal operations and to reduce customer inconvenience.
- Working closely with the Work Reception function to ensure that all customer work requirements are efficiently and expeditiously screened, validated, and entered into IFS-M or alternative system.
- Developing, updating, and distributing customer related information such as customer handbooks, pamphlets, newsletters, flyers, and articles for installation publications.
- Coordinating with the housing office, self help store, and installation information distribution centers to ensure pertinent information gets to DPW customers.
- Receiving, validating, investigating, and resolving DPW customer complaints. Customer Service receives customer complaints, contacts supervisors to validate and identify the cause of the complaints, and coordinates with supervisors to resolve the complaints to the customer's satisfaction.
- Maintaining a customer query log to keep statistics on the total number of WO and SO status calls received and a customer complaint log to record customer complaints and the actions taken to resolve each complaint.
- Receiving questions, researching and providing answers to customer questions regarding services available through the DPW, and educating them about how to request services.
- Soliciting customer feedback on DPW services and generating reports for review by the Engineering Resource Manager (ERM) or DPW Business Manager (DBM).

c. Work Reception. Work Reception consists of establishing and tracking all requests for RPMA work or services and maintaining active and historical workload records. Depending on the size of the organization and the resources available, the duties listed below may be done by separate SO and Work Order Clerks or may reside in one combined position. Functional elements of the Work Reception component include the following:

- Receiving Work Requests and SOs from customers and after hour service coordinators.
- Entering work and service requests into the IFS-M Customer Service Module or into an alternative system.
- Ensuring accurate customer, facility, job, and job costing information is recorded.
- Determining the priority of the SO from established criteria.
- Assigning appropriate codes to incoming work to include task codes, program indicator codes, program category codes, and work status codes.
- Approving and dispatching emergency SOs.
- Sending all approved SOs to the appropriate shop supervisor or Contracting Officer's Representative (COR).

- Establishing and maintaining hard copy Master Job Folders for all Work Requests and WOs (J, S, P, B, and M Work Document types).
- Forwarding Work Requests to Work Coordination.
- Entering and maintaining the status of SOs.
- Providing customers with work status information regarding their Work Requests and SOs.
- Providing guidance to the requester if the request is for self-help work (that is, approval procedures, materials pickup location, and workmanship standards).
- Completing, canceling, or closing out SOs that are not closed by the L&E entry process.
- Compiling recurring work reports and statistics from data maintained in IFS-M (or alternative system) on the number of work and service requests generated, active, canceled, or completed.
- Maintaining the IFS-M customer identification codes, work status, and task code tables.

d. Work Planning. Work Planning is described in Chapter 2.

e. Work Coordination. Work Coordination consists of screening, staffing, and expediting the approval process for all Work Requests for RPMA work and includes the following responsibilities:

- Receiving Master Job Folders from Work Reception and checking for consolidation or duplication of requests.
- Staffing the Work Requests through other offices such as Safety, Provost Marshall, Operations & Maintenance, Energy, and Environmental.
- Determining whether the requested work is authorized and appropriate to be performed with government resources; whether it is reimbursable or non-reimbursable; whether the resources are available to accomplish the work; the proposed method of accomplishment (i.e., in-house or contract); and the priority.
- Approving, or obtaining approval of, IJO work and funding prior to forwarding the work to Work Estimating or to Engineering Plans & Services (EP&S).

f. Work Estimating. Work Estimating consists of determining the determining technical requirements, planning the work, and estimating labor hours, material, and equipment resources along with the cost to perform a specific job, service, or operation. Responsibilities include:

- Maintaining estimating standards including Unit Price Standards(UPS), Engineered Performance Standards (EPS), Service Order standards, and preventive maintenance/recurring maintenance standards.
- Maintaining the work status of all work assigned to Work Estimating in IFS-M or alternative system.
- Preparing scoping estimates (also known as “unit price” or “desktop” estimates).
- Planning and preparing detailed estimates for IJOs.
- Planning and preparing revised estimates for jobs that involve changes in scope.
- Producing reports from data in IFS-M Work Estimating function, or alternative system for use in long and short range planning, workload tracking, and variance analysis.

g. Material Coordination. The Material Coordination function may be a responsibility of the Facilities Engineering Supply Division, ERMD/DBM, or Operations and Maintenance Division (O&MD). It consists of ensuring that all materials required to perform a Work Order are identified on the Bill of Materials (BOM), obtained in a timely manner, and identified and staged for the job. It also involves updating the material status in IFS-M or alternative system from receipt of the BOM requirement through material issue

to the shops. The Material Coordination function includes the following duties:

- Reviewing and correcting Work Order BOM item information.
- Identifying BOM items that are in stock (on-hand) or on order (due-in) and locating sources of supply for BOM items to be ordered.
- Initiating purchase orders for BOM items not in stock or where due-in quantities are insufficient.
- Assisting the Stock Control Clerk with vendor part substitutions.
- Receiving and inspecting BOM items ordered on purchase orders.
- Staging BOM items by project or Work Order number.
- Correcting and updating the Supply Catalog of frequently used materials, whether kept as on-hand stock or bought as needed.
- Correcting and updating BOM information as Work Orders that require changes in scope.
- Informing Work Scheduling when all materials for a Work Order are received and staged.

h. Work Scheduling. Work Scheduling matches requirements with resources in an organized manner to provide for the timely, orderly, and economical accomplishment of in-house work and the orderly assignment of work to the individual DPW shops. This effort involves coordinating and scheduling all productive shop hours available and tracking the status of Work Orders from the time they are received from Work Coordination until the work is completed. The Work Scheduling function includes the following responsibilities:

- Projecting the number of labor hours available for performing in-house work during the quarter.
- Coordinating weekly preparation of input of shop hours available from the production shops.
- Coordinating with other installation activities (e.g., Fire Protection, Environmental, Provost Marshal, and the Utilities Division) prior to placing any work on the Weekly Shop Schedule that will affect those activities.
- Developing and maintaining the Quarterly Work Schedule (QWS) for approved in-house work based on the projected labor hours available, the Annual Work Plan, and the priority of each WO.
- Developing and maintaining the Monthly Work Schedule (MWS) based on the projected labor hours available on the updated QWS.
- Assigning work to the shops during a specific week or weeks.
- Coordinating and conducting the weekly scheduling meeting.
- Coordinating with the Supply Division to determine when all the materials for a WO are available, staged, and ready for pickup by the respective shops.
- Updating the work status code of the WO in IFS-M, or alternative system when the work is assigned to a shop at the weekly scheduling meeting.
- Tracking the status of scheduled work from assignment to the lead shop through completion.
- Maintaining a file of in-house Master Job Folders from WO approval through WO accomplishment.
- Acting as the Customer Service and Work Coordination primary point of contact for approved in-house work.
- Initiating the close-out process for completed work.

i. Work Accomplishment. The accomplishment of approved WOs and SOs is the responsibility of the Production Shops. It consists of the supervision and management of resources and the execution of WOs to perform DPW maintenance and repair, new construction, minor construction and alteration jobs, services, and operations. Work Accomplishment functional personnel include the shop supervisors and craft personnel. Once work has been placed on the

schedule to be performed in-house, shop personnel become responsible for performing the work and maintaining the status of all work assignments.

j. Work Evaluation. Work Evaluation consists of compiling and analyzing work and cost data on a continual basis to determine whether installation operations, maintenance, and repair requirements are being provided in the most efficient, cost effective, and productive manner. Work Evaluation responsibilities include:

- Determining whether Standing Operations Order (SOO) and Annual Work Order performance schedules are being met.
- Determining the effectiveness of SOO and Annual IJOs in optimizing DPW resources and property.
- Tracking the completion time for IJOs and Special Project WOs.
- Developing a target deadline for work completion.
- Determining whether approved IJOs and Special Project WOs are performed as scheduled and specified.
- Accomplishing variance analysis.
- Compiling SO work performance indicators and measuring DPW shop performance of SO work.
- Compiling and analyzing organization and shop overhead use data.
- Conducting studies using industrial engineering techniques to determine DPW staff productivity and work process effectiveness.
- Providing DPW management personnel with workload and performance data on a routine or scheduled basis through the maintenance of the Installation - Executive Information System(I-EIS).

3-5. Army Material Command (AMC) Installations

The Army Material Command is more product oriented than other

MACOMs. At the installation level, there are differences in organizational structure and management practices than those. Some AMC installations are Government-operated. At these installations, the facilities engineering function may be part of a consolidated Directorate of Installation Support or Directorate of Engineering and Logistics. The engineering staff is still responsible for the RPMA work management program. Other AMC installations are Government-Owned, Contractor Operated (GOCO). The RPMA functional responsibilities are governed by contract provisions. Some other differences are as follows.

a. Funding for RPMA. Operations and maintenance at AMC installations is only minimally funded by Operations and Maintenance, Army (OMA) funds. Chapter 2 contains a description of the funds which support RPMA at AMC installations. Most AMC DPWs are allocated funds at the beginning of the fiscal year to accomplish service order and standing operating order type work. Typically, funds for individual job orders are not allocated to the DPW but are retained by the installation resource management organization.

b. Work Coordination. At installations where the DPW does not control its own project funds, valid work requests above certain funding thresholds are submitted to the installation resource management activity which assigns a project control number (PCN) and provides a fund citation. After this is done, the work can be accomplished.

c. Material Coordination. Since AMC is product oriented, its installations operate under a central supply concept. If a work request is slated for in-house accomplishment, a request for materials must be sent to the installation central supply activity.

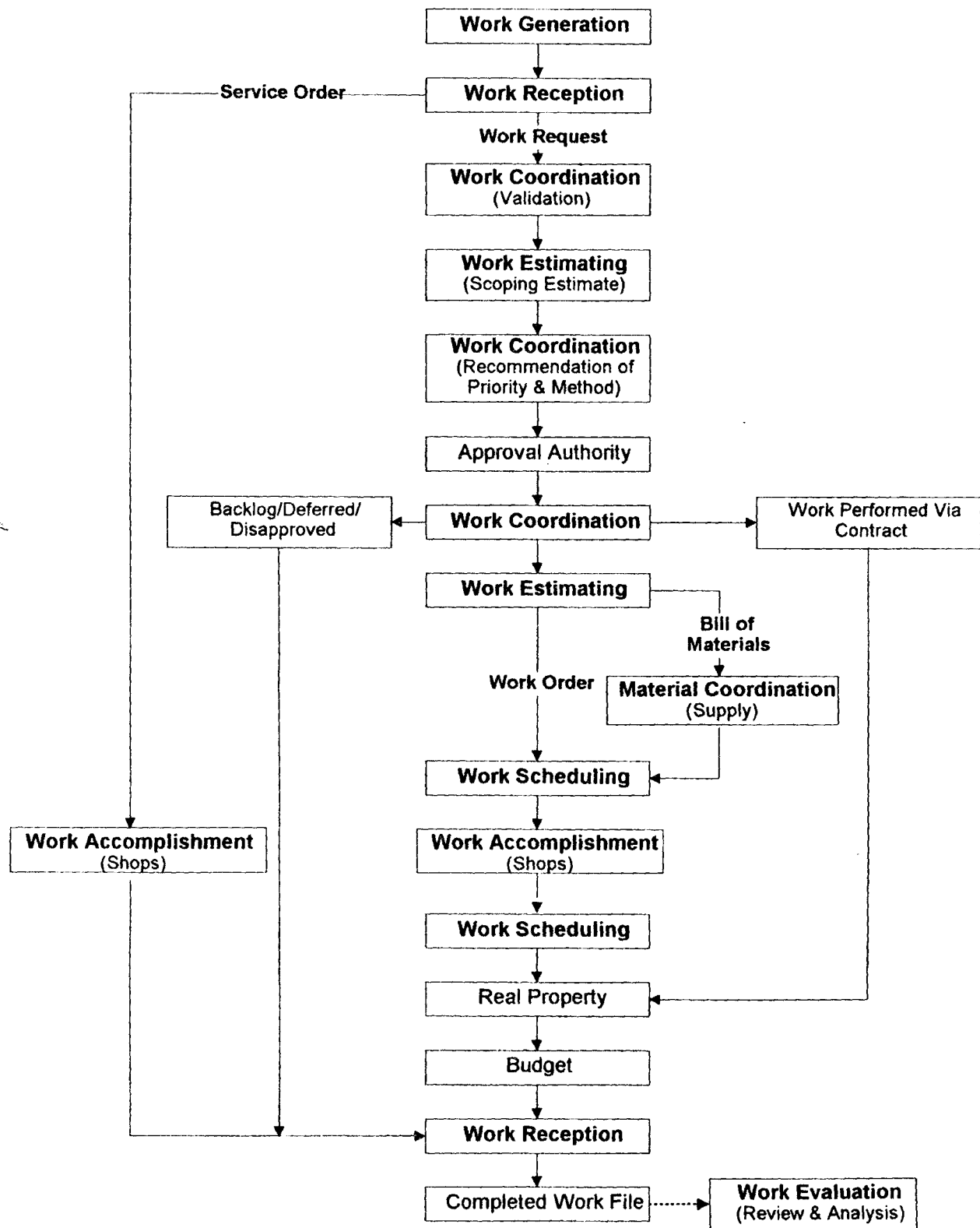


Figure 3-1. DPW work flow summary

Chapter 4 Army Family Housing Work Management

4-1. Special considerations in managing Army family housing (AFH) work

This chapter addresses important differences and some unique requirements that the DPW and AFH managers should consider.

a. Closer work coordination. Scheduling work in AFH requires far more attention to detail than work scheduled in other types of facilities. Shop personnel cannot always gain access to homes if their visits have not been coordinated well in advance and confirmed again before leaving the shops.

(1) Between-Occupancy Maintenance. Work coordination is especially important for between-occupancy maintenance. Under the Business Occupancy Program, housing resources are based upon the maximum occupancy of quarters. If down time is minimized, the installation receives the maximum amount of housing funds. Service members are able to move into quarters quickly and reduce their expenses.

(2) General Officer, Flag Officer, and Commander Quarters. Close coordination is needed for work to be performed on general and flag officer quarters (GFOQ) and commander quarters. Those occupants must frequently use their quarters for official functions, thus limiting time available for facilities work.

b. Preventive maintenance teams. AFH preventive maintenance teams can provide a greater level of DPW responsiveness. A team consists of one to three craft personnel and visits each quarters about every 90 days to perform minor maintenance and repair work that occupants have noted on a Work Request form kept at the quarters. Under this method, the DPW is responsive to customer maintenance requirements while decreasing work reception and scheduling workload.

c. Property managers. Property managers can replace housing inspectors. Given "geographic ownership" of a housing area or part of a housing area, property managers perform the duties of housing inspectors and also act as technicians and AFH advocates. They are normally classified in the Career Series 1173 and are given a great deal of responsibility for customer responsiveness.

d. Project Review Committee. Many installations appoint a project review committee for AFH work. The membership includes area mayors, family members, and AFH representatives. They review AFH project designs to emphasize aesthetics and utility and may recommend project priorities.

e. Funding limits and approvals. The AFH appropriation has different funding and approval levels than other funds. Appendix B of AR 210-50 lists these funding limitations and approval authorities. DPWs may impose further local restrictions or requirements on AFH funding. For example, Service Orders are normally used for work estimated at \$2,000 or less. A DPW may prefer a lower limit for AFH Service Orders to ensure greater control of limited funds. Work receptionists should not be allowed to approve Service Orders for family housing improvement work. Such approval should come from an appropriate level of management.

f. Quarters cleaning policy. Housing occupants must thoroughly clean their facilities before they are allowed to depart the installation. Quarters cleaning policies should establish the same standard of cleanliness for arriving and departing personnel and one standard of cleanliness whether cleaned occupants or by contractors. Quarters cleaning contracts are managed more effectively when the Contracting Officer Technical Representative (COTR) is in the installation housing office.

4-2. PPBES for AFH

The PPBES described in chapter 2 applies to the AFH planning and work accomplishment processes. The system yields better results when AFH Managers are involved throughout the process and can be even more effective if AFH Managers educate DPW personnel in some of the special aspects of AFH resource management.

a. Work identification and generation. AFH management should educate shop personnel and preventive maintenance teams to be

alert for potential facility problems. Unlike installation facilities, most AFH quarters are almost identical so that a problem found in one or two of them may be an indicator of similar problems in all of them.

b. Project lists. Since AFH projects are funded from a separate appropriation, AFH engineer technicians should develop the list of AFH project requirements. The technicians should meet with shop personnel to discuss facilities problems and improvements and should develop the scope of work for projects.

4-3. Contingency planning

An important requirement for an installation with an AFH maintenance contract is to have a written contingency plan in case of contractor default. The plan contains a list of alternate contract sources for temporary use or procedures for in-house resources to step in and meet the AFH maintenance and repair requirements. Items addressed in the contingency plan include maintenance and repair, emergency services, flood control, snow removal, trash removal, fuel supply, and quarters cleaning. Similar contingency plans should also be available for leased housing.

4-4. Utilities

Utilities represent a large expenditure from the AFH budget. A common example of over-billing occurs when AFH facilities are diverted or converted to other uses, but their real property use codes and unit assignments are not changed in the Real Property functional area of IFS-M. The budget office continues to charge AFH for the utilities for those buildings. This type of error is easily made when utility bills are posted by area and only one or two buildings in an area have been diverted or converted. Installations with IFS-M can use the utility billing feature of IFS-M Job Cost Accounting, which is designed to calculate the cost of utility consumption for reimbursable customers and produce reports for the customer and the Finance and Accounting office. The system will compute consumption in any of three methods: metered consumption, prorated distribution, and flat rate charge.

4-5. AFH work management automation

AFH Manager and the IFS-M system administrator must jointly decide the types and frequencies of IFS-M reports that AFH will receive. The Work Request Status Report, a pre-formatted IFS-M on demand hard copy report, is particularly useful for work management. This report provides the status of all open AFH work requests as well as those that have been canceled, completed, or disapproved within the last 30 days. The system administrator can design system queries to provide reports containing whatever data elements the AFH Manager desires in any format and with any frequency.

Chapter 5 Review and Analysis

5-1. Overview

Review and Analysis (R&A), is a good management practice DPWs can use to improve productivity, operational efficiency, and effectiveness; and achieve cost savings. Performance indicators can be measured and tracked over time to determine whether productivity and quality problems exist and where improvements can be made. Teams can be established to analyze the symptoms, determine the cause of the problems, and develop corrective actions. The review and analysis process will help the DPW determine the following:

- What is being done.
- How much is being done.
- What problems exist.
- Whether more can be done with the available resources.
- What effect management initiatives have on DPW operations.

5-2. R&A Tools

The tools of an effective R&A program already exist within many DPW organizations.

a. Management Commitment. Management commitment is the most vital element of the DPW R&A program. DPW management must support the collection and analysis of data, identification of problem areas, development of corrective actions, and their implementation.

b. Reliable Data Sources. The R&A program must be supported with relevant data. DPWs using the Integrated Facilities System—Mini/Micro (IFS-M) have a powerful data collection tool for most of the data needed. The remaining data comes from off-line sources. DPWs that do not have IFS-M are not precluded from establishing R&A programs. There are many commercial software and systems available to manage work and collect data an effective R&A program. At installations where no automated system is used, manual records can be established to collect the work management information DPW managers need for an effective R&A program.

c. Activity Based Costing (ABC). Activity Based Costing is an accounting technique used to determine where funds are expended and what is being produced. ABC is an important tool for functional managers since it provides information not available from traditional accounting systems. ABC encourages managers to determine—

(1) What activities are needed to accomplish the organization's service.

(2) How activities can be modified to achieve cost savings or improvements.

(3) What activities do not actually add value to the organization's services.

(a) ABC is applicable to Army garrison and installation services and is an effective and simple way to identify full costs of services to customers and to develop unit costs that can be used to develop rates for reimbursable customers.

(b) ABC complements existing fiduciary systems and, until standard financial systems are developed, it can provide better management accounting information, identify potential business process improvements, and raise cost consciousness of managers.

5-3. Implementing R&A in the DPW Organization

a. Establish tasks. R&A program tasks begins with the DPW Director and Deputy Director. For the program to be successful, one of these two top level DPW managers must commit time and interest to the process. The R&A function is usually accomplished by the Engineering Resources Management Division (ERMD) Chief or the DPW Business Manager (DBM). Other key DPW members include, Engineering Plans and Services, Operations and Maintenance, Supply, and Budget.

b. Review Each DPW Element. Each element should be reviewed to gain information on the current status of each element and an overview of the operational state of the DPW. The review helps identify potential problem areas and the amount of management information available.

c. Identify Performance Indicators. Performance indicators are used in reviewing and analyzing performance. With automation, DPWs can obtain compiled data and manipulate it in virtually any way imaginable. Simply because data is abundant and easy to get does not mean the data will support the Review and Analysis process. The DPW should select performance indicators that identify where a potential problem exists. Some sources include:

(1) *IFS-M Data.* IFS-M operates in a relational database management system that allows users to obtain data using Structured Query Language (SQL). The U.S. Army Center for Public Works maintains a guide of standard queries. These queries can be used or new ones can be developed.

(2) *Standard Operating Procedures.* The U.S. Army Center for Public Works has a series of generic Standard Operating Procedures (SOPs) for DPW operations. Performance indicators are included in these SOPs.

(3) *Installation—Executive Information System (I-EIS).* An I-EIS is a user-friendly method to view management information from

IFS-M and other existing databases. It is designed so users can access information without knowledge of SQL or specialized computer skills. It uses a database that shows data in tabular or graphical displays by months, quarters or fiscal years.

d. Establish Benchmarks. Some performance benchmarks are minimums set by regulatory requirements or other performance mandates such as a Commercial Activities (CA) Performance Work Statement. Others are established by the DPW based on experience. Benchmarks are goals or objectives against which actual performance can be compared.

e. Determine the Review Interval. The review interval requires common sense. Generating reports and performing the analysis associated with each indicator takes staff time and computer time to run queries or download data. As high interest indicators show that corrective actions are working, longer intervals between reviews may be acceptable.

f. Review Database Sources for Accuracy and Timeliness. Data used in the R&A program must be accurate and current. Before analysis is done, determine if correct data is being entered into IFS-M and other systems. Often this problem is the result of not creating work documents for every DPW expenditure. Purchased utilities is a common example. Although a contract exists for purchased utilities, the requirement is not recorded on a work document and the expenditure data is not entered into the database. Every time the DPW pays for purchased utilities, the information system fails to capture the costs. From an R&A perspective, a look at utilities expenditures that include in-house generated services and purchased services is inaccurate.

(1) Data accuracy is also based on correct input of data. IFS-M Work Estimating provides a good example. Work Estimating in IFS-M requires Planner/Estimators to develop estimates on Individual Job Orders (IJO) using phases. Phases that allow the system to capture are as follows:

- Whether the work is reimbursable, non-reimbursable, or some of both.
- Whether the work is K or L Account work or both.
- What facilities the work is being performed on
- What shops are to perform the work
- What equipment is to be used for each phase

(2) If Planner/Estimators fail to properly phase the job, queries on any of the data elements associated with the job can be inaccurate. If half the work is K Account and half L Account but only one phase is created, the half not recorded is not accurately reflected in information system output reports. Work estimating phases have a further importance to IFS-M data after the work is accomplished. Labor hours are recorded by the job phase on which they are worked. If the craft personnel fail to properly record their time by phase, erroneous data is entered into IFS-M.

g. Assign Tasks for Analysis. Individuals performing analysis should be familiar with the work performed to provide knowledgeable insights. If the analysis is conducted by someone outside the functional component, the component manager should be provided with copies of all the analysis results.

h. Review Results of the Analysis. Once the numbers have been compiled and analyzed, DPW managers should review the results by comparing the performance indicator with the established benchmark. If there is a variance, management determines the corrective action.

i. Implementing Corrective Action. Through regular reviews, the DPW managers track the progress of corrective actions. When an indicator shows stability, the interval between reviews can be extended.

Chapter 6 Contracted DPW Operations

6-1. General

The DPW can accomplish many operations and maintenance functions by contract. A variety of contracting methods are available such as Indefinite Quantity (IDQ), Job Order Contracts (JOC), Time and Material (T&M) Contracts. These methods are explained in detail in the Federal Acquisition Regulation (FAR), Part 16 and the Army Federal Acquisition Regulation Supplement (AFARS). Many installations have implemented the Commercial Activities (CA) program and have completed cost studies as specified in the Office of Management and Budget (OMB) Circular A-76. A contractor may replace most of the in-house operations and maintenance work force and usually operates under either a Cost Plus Award Fee (CPAF) or a Firm Fixed Price (FFP) type of contract. Reimbursable customers are billed through separate accounting transactions based on the billings the DPW receives from the contractor.

6-2. Contracted DPW operations

A DPW with a contracted operation is organized differently than one with in-house resources. AR 420-10 describes an alternate organizational structure for the residual DPW organization.

a. Planning and Budgeting. Contracted DPW requirements are included in the Resource Management Plan. When the DPW receives the resource or budget guidance and begins to prepare the input for the BES for the following two fiscal years, the guidance includes the funds required for the contract in the appropriate account.

b. Work reception. When Work Reception is contracted, the Contracting Officer (KO) may preauthorize the contractor to perform select categories of work within specific funding limitations. The KO will identify categories of work and funding thresholds which require Government approval. Limitations will vary depending on the scope of work. The Government must carefully monitor this type of operation to ensure compliance with the contract specifications.

c. Planning and estimating. The contractor assumes most of the planning/estimating functions for IJO work. The DPW should retain some capability in this area to evaluate contractor-prepared work order estimates and process reimbursements from customers.

d. Supplies and material coordination. The contractor usually provides supplies. For those items, if any, that are in the Government's best interest to supply, the contractor should be required to inspect the items upon receipt and maintain accountability records for them. Material coordination should be a contractor's task.

e. Scheduling. The contractor normally schedules the weekly RPMA work. He or she also provides detailed maintenance schedules for daily, weekly, biweekly, monthly, quarterly, semiannual, annual recurring, start-up, and shutdown work. Copies of all schedules are provided to the contracting officer for review and approval. Preventive maintenance programs should be specified in the contract performance work statement.

f. Execution. The performance work statement should specify that the contractor provides work execution data on labor, material, and equipment. The KO may authorize the use of automation systems other than IFS-M.

6-3. Contract management

The DPW nominates Contracting Officer's Representatives (CORs) to support the KO. The amount of authority delegated by the KO to the CORs varies among installations, but the KO is the only individual who can obligate Government funds. The authority delegated to the CORs and procedures for administering the contract are documented in an administration plan.

a. Quality Assurance (QA) Surveillance. QA surveillance is used to evaluate contractor performance and to ensure the Government receives the goods and services specified. The DPW prepares a detailed QA surveillance plan to provide the QA Evaluator (QAE) with a guide to systematically monitor contractor performance. The

plan outlines corrective procedures that can be taken to correct deficient performance. The tools the QAE uses to monitor contractor performance are performance requirement summaries, sampling guides, inventory sheets, surveillance checklists, sample size, random numbers tables, customer complaints, and contract discrepancy reports. Quality assurance focuses on the quality of work performed rather than on the steps taken or procedures used to accomplish that work. Inspection of all completed Service Orders, recurring work requirements, and IJOs is seldom feasible. The QAE selects work to inspect according to planned and random sampling procedures.

b. Award fees. The Cost Plus Award Fee (CPAF) contract is a common form of contract. The award fee is intended to motivate the contractor and is based on evaluations by the Government. The evaluation covers such factors as quality, timeliness, technical ingenuity, and cost effectiveness. The maximum percentage of the award fee and the areas to be evaluated are determined during contract negotiations. Although useful in improving contractor performance, award fees take considerable time and effort to administer. The amount of the award fee is determined by the Government based on the results of QA surveillance. Designated CORs in the DPW rate the contractor's performance for the period based on their surveillance and evaluations to determine the percentage of the award fee the contractor is to get for a specific period of performance. The KO reviews the ratings and recommends an award-fee amount to the award-fee review board whose members usually include some installation directors and deputy chiefs of staff as well as legal, budget, and contracting personnel. The award-fee review board, in turn, recommends an award to the award fee determining official, normally the installation commander, deputy commander, or chief of staff, who makes the final decision. The KO then issues a unilateral contract modification adjusting the contract price by the value of the award fee.

c. Converting a contract to an in-house work force. Contracted DPW functions may be converted to in-house when the KO determines the contract costs are unreasonable or performance is unsatisfactory. Only after exhausting all efforts to develop a competitive contract price through negotiation, repackaging, and re-procurement should the Installation Commander consider the feasibility of in-house performance.

6-4. Contract security problems

Contract security problems arise when the DPW and contractor share management information systems such as the IFS-M database. Managers must be aware of the potential danger of contractors having access to procurement sensitive Government data such as government estimates. IFS-M allows for system access security with password controls at four levels—the UNIX/ORACLE access, the Functional Area, the screen level, and the attribute. The contractor can have access to one or more functional areas but be restricted to specific screens for those areas. The contractor can be granted write access or be restricted to read only authority.

Chapter 7 Environmental Management

7-1. Environmental management and the DPW

The four components of the Army's environmental program are, Environmental Compliance, Environmental Restoration, Pollution Prevention, and Conservation. Environmental stewardship is an integral part of DPW operations.

a. Environmental compliance. Compliance ensures that installation activities meet federal, State, local, and host nation environmental requirements in the areas of wastewater discharge, endangered species, noise abatement, wetlands, air quality attainment, historical properties, and solid and hazardous waste management. Compliance requirements are contained in AR 200-1.

b. Environmental restoration. Restoration includes identification, assessment, and remediation of contamination caused by past waste

disposal practices. Restoration is performed under the Defense Environmental Restoration Program (DERP), which includes the Installation Restoration Program (IRP), the Formerly Used Defense Sites (FUDS) Program and the Base Realignment and Closure (BRAC) Program. These programs are described in AR 200-2.

c. Pollution prevention. Prevention minimizes the generation of pollutants. It includes source reduction, resource recovery and recycling, energy efficiency, and other aspects of waste reduction. The focus is on eliminating hazardous material uses, operations, or processes; minimizing risk; and instilling a pollution prevention ethic throughout the Army.

d. Conservation. Conservation involves the preservation of the land and its renewable natural resources such as forests, fish, and wildlife as well as any historical or archeological resources. AR 200-3 and AR 200-4 detail requirements in this area.

7-2. Programming and budgeting considerations

a. The Environmental Program Requirements Report (EPR). The EPR fulfills the Army's reporting requirements identified in Executive Order 12088 and the Office of Management and Budget Circulars A-106 and A-11. It is an eight-year environmental master plan that documents the status of existing environmental projects and identifies funding requirements for future projects. The projects are classified as follows:

- (1) *Class I.* Out of compliance with laws or regulations.
- (2) *Class II.* Soon to be out of compliance./
- (3) *Class III.* Stewardship or obsolescence issues.

b. Funding. The Army's policy for environmental compliance is that all Class I projects, those Class II projects that will be out of compliance by the end of the fiscal year, and hazardous waste disposal costs must be funded. No funds allocated for those purposes may migrate to other programs. Funding is encouraged for Class II and III projects to reduce risks and engender good community relations.

c. Training. The following environmental training is required by federal statutes and regulations:

- (1) Annual training for hazardous waste managers and handlers
- (2) Annual training for those who respond to spills of hazardous substances
- (3) Annual training for cleanup crews and managers of hazardous sites
- (4) Training for workers who remove asbestos from schools
- (5) Training and certification for water and wastewater treatment plant operators
- (6) Training for Pest Management Certification

7-3. Environmental consideration and documentation

a. Environmental consideration. AR 200-2 provides guidance concerning specific actions requiring environmental consideration. The extent of the consideration given depends on many things, including the type project, public involvement and concern, and any existing or potential environmental impacts.

b. Degrees of environmental consideration. The three degrees of environmental consideration are

- (1) *Record of environmental consideration (REC).* This is the least complicated approach. It describes a proposed action and explains why further environmental analysis is not needed. It is used for projects that are exempt from NEPA requirements, have already been addressed in existing documentation, or are categorically excluded.
- (2) *Environmental assessment (EA).* The next level is required for proposed actions that have potential for adverse impacts on the environment. EAs are conducted to determine the extent of environmental impacts and whether those impacts are significant. If the outcome of the EA indicates that no significant environmental impacts are anticipated, a Finding Of No Significant Impact (FONSI) is distributed for public comment. If significant impacts are possible, an Environmental Impact Statement must be prepared.
- (3) *Environmental impact statement (EIS).* This is the most complex process that is required to ensure environmental policies and

goals are incorporated early in the process for extensive projects. Conditions that prompt the preparation of an EIS include land use changes, adverse effects on wetlands, and actions affecting threatened or endangered species or their habitats. The EIS must contain a full discussion of all significant environmental impacts relating to a proposed action.

Chapter 8 Warranty Management

8-1. General

The DPW should establish a warranty management program and appoint warranty administrators. The administrators can be from the shops, the Housing Division, EP&S Division, or the Contract Management /Construction Inspection Office. Warranty management programs address the following four categories of warranties:

- a.* Equipment owned or installed by in-house or contract personnel.
- b.* Equipment installed through OMA and MCA Projects.
- c.* Equipment installed by facilities occupants.
- d.* Household appliances installed in AFH quarters.

8-2. Roles

a. Warranty administrator. The warranty administrator—

- (1) Maintains warranty records.
- (2) Distributes warranty information to the appropriate work centers.
- (3) Tags each warranted item with notice stating when the warranty is in effect.
- (4) Provides equipment and warranty information to the Real Property Office so it can be entered into the real property functional area of Integrated Facilities System—Mini/Micro (IFS-M).
- (5) Acts as the point of contact between the DPW, customers, contractors, suppliers, and USACE personnel who deal with warranty matters.

b. Shop personnel. Shop personnel are responsible for alerting their Shop Supervisors when they discover that items they have been assigned to work on are under warranty. No work should be done on a warranted item unless the appropriate warranty administrator authorizes the work.

c. Work reception. The customer service functional area within IFS-M flashes a warranty message at the bottom of the screen if equipment warranty data is entered into the Real Property Records. When receiving a request for work on warranted items, the Work Receptionist should notify the applicable warranty administrator before processing the request.

d. Supply. Supply is responsible for securing the warranty documents for all items under warranty it receives and immediately forwarding those documents to the appropriate warranty administrator for action.

8-3. Evaluating warranties

Warranty administrators evaluate warranties to determine if they should be enforced. Decisions are based on operational and economic considerations.

a. Operational considerations. The terms of a warranty may not allow for repair or replacement of an item soon enough to meet operational needs. If contractor/supplier service personnel are located some distance away, the warranty administrator may determine that the DPW should assume responsibility for repairs to avoid a prolonged loss of a critical equipment item. This action may void the warranty.

b. Economic considerations. The resources spent on evaluating and administering warranties on low-cost items usually exceed the value of the warranties. The DPW should establish a dollar threshold (e.g., \$1,000) below which no formal evaluations are necessary. Warranty administrators should compare the potential value of a warranty with the projected cost of administering and implementing it.

c. *Warranty control lists.* These consolidated lists of active warranties should be updated by the warranty administrators when new items of equipment are installed. The lists should identify each warranty item, its location, the extent of coverage, warranty expiration date, and the supplier/contractor name and address, point of contact name and telephone number to contact in case the item fails. Automated lists are easiest to maintain, either in a word-processing system or a more sophisticated database program. IFS-M allows users to identify warranted items through the Real Property functional area and the Facilities Engineering Property Book, but it does not support a warranty database in enough detail for a comprehensive warranty control list. Warranty control lists must therefore be maintained off-line from IFS-M. The HOMES furnishings management software module allows housing managers to track warranted items.

8-4. Identifying warranted items

The warranty management program alerts work receptionists, shop personnel, and work schedulers when a facility or an item of equipment is under warranty.

a. *Work reception.* If equipment and warranty data is in the IFS-M Real Property records, the warranty warning message will flash at the bottom of the Work Request and Service Order screens. Work receptionists should be familiar with facilities and major equipment items under warranty through the warranty control lists. When work involving warranted items is identified, the work receptionist should refer the request to the appropriate warranty administrator for further action.

b. *Planning/estimating.* When Planner/Estimators transfer work requests from the Customer Service functional area of IFS-M to Planning/Estimating, work requests for work on warranted items of equipment will flash the IFS-M warranty warning at the bottom of the screen.

c. *Craft shops.* Shop Supervisors identify work covered by a warranty that has been overlooked by Work Reception and Planning/Estimating. They are familiar with their own warranty records, and hold the warranty control lists from warranty administrators.

8-5. Procedures for in-house warranties

a. *In-House installed equipment.* Warranties on items installed by in-house personnel are evaluated by the appropriate Shop Supervisor as the designated warranty administrator. If preventive maintenance actions are required under the warranty, the Shop Supervisor should alert the Planner/Estimator to update or create a preventive maintenance checklist for the item of equipment. The Shop Supervisor tags the equipment with the warranty notice and sends a copy of the to the Scheduler for insertion in the Master Job Folder upon the completion of the job. The Scheduler sends the Master Job Folder to Real Property to enter the equipment and warranty data into the facility record. When this data is entered into the facility equipment record, the warranty message at the bottom of the Service Order or Work request screen is triggered as soon as the Work Receptionist enters the facility equipment data or the Planner/Estimator calls up the Work Request in Planning/Estimating.

b. *DPW supply coordination.* DPW Supply and Business Management Division/Engineering Resources Management Division must coordinate when ordering large equipment items that are likely to be warranted. If the item arrives in advance of other materials and equipment or before the work can be scheduled in the shops, it may sit in the warehouse for months. This waiting time is often lost from the warranty period, since the period typically begins when the government receives the item.

c. *Equipment installed by contracted DPW.* Warranty procedures for a contracted DPW depends on the warranty clauses written into the contract. Normally, the CA contractor is required to keep track of the existing warranties and warranties on items installed under the contract. The contract should require the contractor to tag warranted equipment and to furnish copies of all warranties to the

government warranty administrator. This should be an item of interest in the government's quality assurance inspections.

8-6. Procedures for contractor installed equipment

The EP&S warranty administrator handles warranties resulting from contracted facility construction or equipment installation from MCA and OMA projects.

a. *Participation in design reviews.* Warranty management for contracted work begins with the design reviews. The DPW should ascertain what items are to be warranted and how those warranties fit into the DPW warranty management program.

b. *Warranty contract clauses.* The warranty administrator coordinates with contracting personnel to ensure that warranty clauses in construction projects are adequate before the contract is put out for bid. Those clauses should establish priorities for warranty repairs, specify response times, and require the contractor to designate local firms to act as representatives for warranty work.

c. *Corps of engineers projects.* The directive covering warranties from projects managed by USACE is Engineering Regulation (ER) 415-348-38. A written Memorandum of Understanding (MOU) between the installation and the USACE field operating agency can be executed to formalize procedures for warranty matters. The MOU should contain procedures for facility transfer, warranties, final inspections, DD Form 1354 execution, unusual requirements (such as joint occupancy), turnover of O&M manuals and as-built drawings, four and nine-month warranty inspections, correction of punch lists, and notification of latent defects.

(1) *Warranty period.* The effective period for a warranty usually begins upon official acceptance of the facility by the installation. Prior to acceptance, the DPW, USACE, and the contractor jointly inspect the facility. Questions on warranties are answered during this inspection.

(2) *Facility transfer to the DPW.* The Contracting Officer gives the DPW warranty documents for the facility and its equipment. Those documents include the names, addresses, and telephone numbers to contact in case of problems. They also include periods, terms, and conditions of the warranty.

(3) *DD Form 1354.* The actual transfer occurs with the appropriate signatures on DD Form 1354, Transfer and Acceptance of Military Real Property. Warranty deficiencies, such as missing documentation, should be annotated on the reverse side of the DD Form 1354. After transfer is complete, the DPW warranty administrator's responsibility is to ensure that all warranty items are entered into the program database and IFS-M Real Property records.

(4) *Warranty problems.* When a problem arises with a critical warranted item, the warranty administrator takes immediate action. Non-critical defects can be noted on Engineering (ENG) Form 4702-R, Observation Card, and action saved for the four or nine-month USACE warranty inspection.

(5) *Critical defect.* The warranty administrator determines whether the defect is the result of troop abuse, improper operation or maintenance, improper design, or improper construction. The warranty administrator can request USACE assistance to make that determination; however, the Contracting Officer is the final arbiter in any controversy regarding the determination.

(6) *Warranted defects.* If the defect is determined to be covered under the warranty, the warranty administrator makes initial contact with the contractor to obtain corrective action through the avenues provided by the contract. The initial contact is usually by telephone followed by a letter, a copy of which is sent to the Contracting Officer. The matter can be referred to the USACE District Engineer if the contractor is not local, the problem involves a major item of equipment, the initial contact is unsuccessful, or the contractor does not respond within a reasonable time.

8-7. Equipment installed by facility occupants

Some installation facility occupants fund and contract facility work directly. Such work on real property may be warranted by the contractor. It is the occupant's responsibility to inform the DPW of all warranties associated with the completed work so that the data

can be entered into the warranty program by the assigned warranty administrator.

a. Establishing the policy. A published installation policy or a MOU between the facility occupant and the DPW establishes DPW responsibility for work on equipment or facilities that the occupant has hired contractors to work on. For such cases, the policy or MOU includes procedures to provide the DPW with copies of contractor warranty documentation.

b. Permit procedures. Some installations require occupants to obtain a DPW permit for any work contracted outside of the DPW purview. When appropriate, permits require the occupant to provide the DPW with copies of contractor warranty documentation.

c. Maintaining the warranty documentation. The DPW maintains warranty documentation provided by facility occupants in the same manner it maintains similar documentation from its in-house or DPW-contracted work.

8–8. AFH warranties

Warranties on household appliances (such as refrigerators and stoves) are usually handled by a warranty administrator in the housing division. When a defect is covered by warranty, the appliance is replaced from the AFH replacement stock. When a number of defective appliances have been accumulated, the warranty administrator contacts the service center to arrange repairs.

Chapter 9 DPW Annual Awards Program

9–1. Overview

This chapter provides guidance for the DPW Annual Awards Program. It describes each award and explains the process for nominating candidates. Participation in the program is optional. Eligibility and evaluation criteria are described in appendixes E through O.

9–2. Individual awards

Individual awards recognize installation level excellence in managing and executing the RPMA and AFH missions. They consist of honorary and monetary awards. The seven individual awards are as follows:

- William C. Gribble Jr., DPW Executive of the Year Award
- DPW Engineering, Plans, and Services Executive of the Year Award
- DPW Business Management Executive of the Year Award
- DPW Housing Executive of the Year Award
- DPW Operations and Maintenance Executive of the Year Award
- DPW Support Executive of the Year Award
- DPW MACOM Support Executive of the Year Award

9–3. Corporate awards

Corporate awards are honorary and recognize excellence in group activities supporting the installation RPMA and AFH missions. The two corporate awards are as follows:

- Installation Support Program of the Year Award
- DPW Support Contractor of the Year Award

9–4. Nomination procedures

a. Nominees compete within their peer group (for example, large, medium, or small installation) to maintain keen competition. Nominations should be prepared and submitted in the format shown in Appendix N and are limited to four typewritten or printed pages. The nominations should identify the most significant achievements that portray the nominee's excellence in management. Statistical information should complement accompanying narratives.

MACOMs ensure the validity of the objective portions of evaluations.

b. Except as provided below, MACOMs may submit only a single nominee to represent the MACOM for each award. MACOMs allowed to submit two nominees for each award are as follows:

- Army, Europe and Seventh Army
- Forces Command
- Army Materiel Command
- Army Training and Doctrine Command

9–5. Selection procedures

MACOMs play an active role in the evaluation and selection of award winners. The process and procedures for selecting award winners are described in appendix O.

9–6. Presentation procedures

Awards are presented each year by a representative of Headquarters Department of Army during an Engineer Conference or other appropriate forum. Award winners, their immediate commanders, and other appropriate personnel are invited to the ceremony.

Appendix A References

Section I Required Publications

AR 1-1

Planning, Programming, and Budgeting Within the Department of the Army. (Cited in para 2-2.)

AR 70-6

Management of the Research, Development, Test and Evaluation, Army Appropriation. (Cited in para 2-4a(3)(c).)

AR 200-1

Environmental Protection and Enhancement. (Cited in para 7-1a.)

AR 200-2

Environmental Effects of Army Actions. (Cited in para 7-1b.)

AR 200-3

National Resources--Land, Forest, and Wildlife Management. (Cited in para 7-6d.)

AR 200-4

(Cited in para 7-6d.)

AR 210-20

Master Planning For Army Installations. (Cited in para 2-3a.)

AR 210-50

Housing Management. (Cited in para 4-1e.)

AR 420-10

Management of Installation Directorates of Engineering and

AR 700-90

Army Industrial Base Program.(Cited in para 2-4a(3)(b).)

DFAS-IN 37-1

(The Army Management Structure (Cited in para 2-2.)

Section II Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand this publication.

AR 5-20

Commercial Activities Program

AR 11-27

Army Energy Program

AR 25-1

Information Management

AR 415-15

Army Military Construction Program Development and Execution

AR 415-28

Department of the Army Facility Classes and Construction Categories

AR 415-40

Historic Preservation

AR 420-41

Acquisition and Sales of Utilities Services

AR 420-43

Electrical Services

AR 420-46

Water Supply and Wastewater

AR 420-47

Solid and Hazardous Waste Management

AR 420-49

Heating, Energy Selection and Fuel Storage, Distribution, and Dispensing Systems

AR 420-54

Air-Conditioning and Refrigeration

AR 420-55

Food Service and Related Equipment

AR 420-70

Buildings and Structures

AR 420-72

Surfaced Areas, Railroads, and Associated Appurtenances

AR 420-81

Custodial Services

AR 735-5

Basic Policies and Procedures for Property Accounting

Section III Prescribed Forms

DA Form 2764

Job Planning Worksheet.(Prescribed in para D-4.)

DA Form 4283

Facilities Engineering Work Request. (Prescribed in para 3-1.)

Section IV Referenced Forms

DA Form 4283

Facilities Engineering Work Request

DA Form 4284

Facilities Engineering Work Order

DA Form 4286

Facilities Engineering Contract Data

DA Form 4287

Service Order

DD Form 1354

Transfer and Acceptance of Military Real Property

Appendix B Work Management System Guidesheet

B-1. Introduction

The Guidesheet in this appendix may be used to assess the work management system and to identify opportunities for improvement. All findings or

Note. should be keyed to this Guidesheet. Though “no” is not necessarily a wrong answer, all questions answered “no” should be fully explained by DPW management. This Guidesheet consists of six parts. Others may be added, as required, to satisfy installation-specific requirements.

- Resource planning function
- Work reception function.
- Estimating function.
- Material coordination function.

- Scheduling function.
- Total Army Quality function.

B-2. Work management system Guidesheet

a. Resource Planning

- (1) Is the DPW Resource Management Plan (RMP) prepared in accordance with guidelines in DA Pam 420-6 and any supplemental instructions issued by the MACOM HQ?
 - (2) Is the DPW developing the RMP to include all requirements necessary to operate and maintain the installation real property and achieve the long-range goals and objectives?
 - (3) Is the RMP reflecting requirements by priority, where feasible?
 - (4) Are all major DPW programs included in the RMP?
 - (5) Has the annual work plan portion of the RMP been approved by the installation commander?
 - (6) Have all DPW programs been assigned a program manager?
 - (7) Has a Recurring Work Plan (RWP) been developed that is complete, updated, and used for scheduling and Annual Work Plan(AWP) development?
 - (8) Has an installation planning board (IPB) or equivalent been established for minor construction project review and for setting priorities?
 - (9) Is the IPB being used for review and approval of major programs to include M&R, NAF, AFH, MCA, and other such reimbursable and nonreimbursable programs?
 - (10) Is the IPB being used for all significant project sitings and space management actions?
 - (11) Does the IPB meet at least annually?
 - (12) Are DPW programs being thoroughly coordinated within the DPW staff?
 - (13) Does the responsibility for the coordination of the development and maintenance of the RMP rest within one branch, office, or division?
 - (14) Do all managers down to branch level have and use the RMP?
 - (15) Does the RMP reflect requirements up to 5 years in the future?
 - (16) Is preventive maintenance (PM) being accomplished on a schedule?
 - (17) Are all PM IJOs planned in detail identifying: facilities involved; PM tasks to be performed; labor-hours required for each task using Engineered Performance Standards; and materials required to accomplish the PM work?
 - (18) Are reviews made throughout the year by Chiefs, BM, B&G, and Utilities Divisions (or O&M Division) of PM IJOs to revise the internal plans and schedule changes in conditions?
 - (19) Is a standard operating procedure for accomplishing the resource planning function published and current?
- ### *b. Work Reception Function*
- (1) Is the work reception section readily accessible to customers?
 - (2) Do all work requests come to the work reception section?
 - (3) Is the \$2,000 estimated cost limit for service orders (SOs) being followed?
 - (4) Are minor construction SOs being approved by the Chief, BM?
 - (5) In case of EMERGENCY: Are SOs immediately processed for execution and the time shown on the SO?
 - (6) Is a time limit established for completion of SOs?
 - (7) Does the work receptionist have a copy of the latest contract list?
 - (8) Does the work receptionist have a copy of the real property disposal list?
 - (9) Does the work receptionist have a copy of the warranty list?
 - (10) Is a suspense system maintained to provide for follow-up action on uncompleted SOs by appropriate supervisors?
 - (11) Has an SO priority (see appendix F) been developed and disseminated?

- (12) Are SOs coded by type of work?
 - (13) Is current PM schedule available to personnel to permit referral of SOs by appropriate supervisors?
 - (14) Is a list of approved self-help tasks available to preclude DPW acceptance of self-help work?
 - (15) Have the work receptionists attended the self-help class?
 - (16) Is a standard operating procedure for accomplishing the work reception function published and current?
- ### *c. Estimating Function*
- (1) Are priorities for jobs awaiting estimate set by the supervisor of planning estimating or chief, business management function?
 - (2) Are current references available (e.g., engineered performance standards (EPS))?
 - (3) Are EPS used on all IJOs for which standards are available?
 - (4) Are craft phases identified?
 - (5) Are job phases identified?
 - (6) Are the job phase calculation sheets (DA Forms 2764 (Job Planning Worksheet)) properly prepared?
 - (7) Is the bill of materials (BOM) properly prepared?
 - (8) Are sketches drawn where needed?
 - (9) Are travel zone charts available?
 - (10) Are IFS-M and FESS used to their full potential where available?
 - (11) Are travel zones applied?
 - (12) Are all planner/estimators school-trained in use of EPS?
 - (13) Is adequate transportation available for planner/estimators?
 - (14) Are estimates revised by planner/estimators if scope of work changes?
 - (15) Is a standard operating procedure for accomplishing estimating function published and current?
- ### *d. Material Coordination*
- (1) Is a suspense copy of DA Form 4284 put in awaiting material suspense file?
 - (2) Are available materials forwarded to the holding area?
 - (3) Are supplies/materials separated by job?
 - (4) Are supplies/materials properly marked with the IJO number?
 - (5) Are supplies/materials not needed returned to the warehouse?
 - (6) Is a monthly follow-up made on outstanding supplies?
 - (7) Is a standard operating procedure for accomplishing the material coordination function published and current?
- ### *e. Scheduling Function*
- (1) Are scheduling meetings being held weekly?
 - (2) Are the appropriate officials and the DPW or Deputy attending scheduling meetings?
 - (3) Are priorities observed?
 - (4) Are data for scheduling from shops available?
 - (5) Are hours effectively allocated for PM?
 - (6) Are hours effectively allocated for SOs?
 - (7) Are all IJOs in shops effectively scheduled? (Except bona fide EMERGENCIES.)
 - (8) Are unit schedules and IJOs released to shops prior to the upcoming week?
 - (9) Are completed IJOs returned the next working day?
 - (10) If scope of work has changed, has re-estimation been initiated?
 - (11) Do the weekly unit schedules account for the entire work force?
 - (12) Has a master schedule been established?
 - (13) Is a standard operating procedure for accomplishing the scheduling function published and current?
- ### *f. Total Army Quality Function*
- (1) Are all DPW managers participating in Total Army Quality(TAQ) programs for their respective areas?
 - (2) Is the TAQ portion of the AWP being used and periodically updated?
 - (3) Is the DBP being adjusted based on TAQ feedback?
 - (4) Is progress on divisional objectives being closely monitored?
 - (5) Are completed IJOs tabulated to determine shop effectiveness?
 - (6) Are variations in excess of plus or minus 10 percent between

estimate and actual labor-hours on IJOs investigated by division supervisory and planner/estimator personnel?

(7) Are SOs analyzed and compared with performance standards?

(8) Are methods improvement or other management improvements studied to determine productivity and effectiveness of the DPW work force being completed on a regular basis?

(9) Do files indicate that corrective action has been taken on TAQ recommendations by appropriate supervisory personnel?

Appendix C

Facility Component Inspection

C-1. Inspection procedures

MACOMs and DPWs should establish and maintain a systematic and comprehensive program to inspect facilities for maintenance and repair (M&R) needs. This program should not be confused with the Installation Status Report (ISR) program that facility occupants execute. All M&R requirements determined from facility component inspections remain at the installation and should be recorded in the DPW work management system via DA Form 4283 or DA Form 4287. Figure C-1 shows the component inspection flow process.

C-2. Inspection frequency

MACOMs or installations will establish the inspection frequency. The standard meantime between inspections for any facility component should not be less than 6 months nor more than 3 years. MACOMs and installations should consider condition of facilities, available resources, and cost-effectiveness when establishing the frequency for inspections. Installations should establish individual frequencies for different components. For example, the frequency for roofs may be twice a year, while the frequency for drainage structures may be once every 3 years.

C-3. Facilities or structures

Facilities or structures may be subdivided into components as determined by MACOM or installation policy. Facilities may be inspected at the individual facility level without maintaining records of M&R requirements at a component level. This approach may be appropriate for installations without access to automated support for DPW work management. The component structure used by IFS-M may be adopted or revised by DPW activities that choose to manage at the component level. DPWs may use a generalized system of categories (such as interior work, exterior work, utility systems work, and so forth) or a more detailed system depending on MACOM and installation policies and needs.

C-4. Statistical methods and analysis

Statistically valid sampling of facilities and components is recommended. A sufficiently homogeneous group of facilities or components must exist. Standard statistical methods and analysis will determine the group size and content and the sample size required to produce valid results. Sampling plans should consider factors such as age, type of construction, use, frequency of repair, and overall condition of facilities. The basis for selection of any sample group or sample size should be documented.

C-5. MACOMs and installations

MACOMs and installations should make maximum appropriate use of standard DPW work management policies, procedures, forms, and terminology when establishing specific facility inspection programs. It is important that the inspection program be an integral part of the DPW work management system rather than being separate from it.

C-6. Facilities component inspection program

The facilities component inspection program at an installation may be supplemented by architectural engineering (A-E) contracts if such support is cost-effective. Prudent management control should be used to specify contractual support requirements and to monitor services provided, to ensure that the desired results are realized. Generalized "deficiency tabulation surveys" should be avoided if they fail to include input of a valid work request into the DPW work management system.

C-7. DPW inspection

DPW inspection policies should be designed and managed to minimize or eliminate redundancies. For example, roof inspections by B&G personnel and by facility component inspectors should not be duplicated. Similarly, annual truss, boiler, or pavement inspections should not be duplicated by similar facility component inspections. Facility real property inventories also should be included. DPW management should ensure adequate coordination and integration of all facilities-related inspections to prevent redundancies or inefficiencies. Coordination should include maintaining a listing of all facility-related inspections, obtaining a schedule from other inspecting activities (safety, housing, fire, etc.), reviewing schedules, and taking actions to integrate inspections efficiently.

C-7. Inspection program

The facility component inspection program includes development of a preliminary estimate of the costs to perform the needed M&R work. No detailed job phase planning and estimating is initially required. Accordingly, engineered performance standards (EPS) are not appropriate for preliminary estimates. Other available historical data or appropriate estimating standards should be used for these preliminary estimates. Unit cost estimates are preferred. The accuracy and detail of the estimates must be sufficient to enable approval action and their use in DPW planning and programming activities.

C-8. Inspection data

Facility component inspection data can be used to develop delivery orders as part of existing requirements contracts. For example, if an installation has a requirements contract for floor, window, or door repair, a component inspector could group the requirements and fill out the appropriate quantities on the delivery order schedule. After approval and funding, the work would then be quickly done. Grouping requirements minimizes the administrative burden and prevents a backlog of many small jobs. Figure C-2 depicts this process.

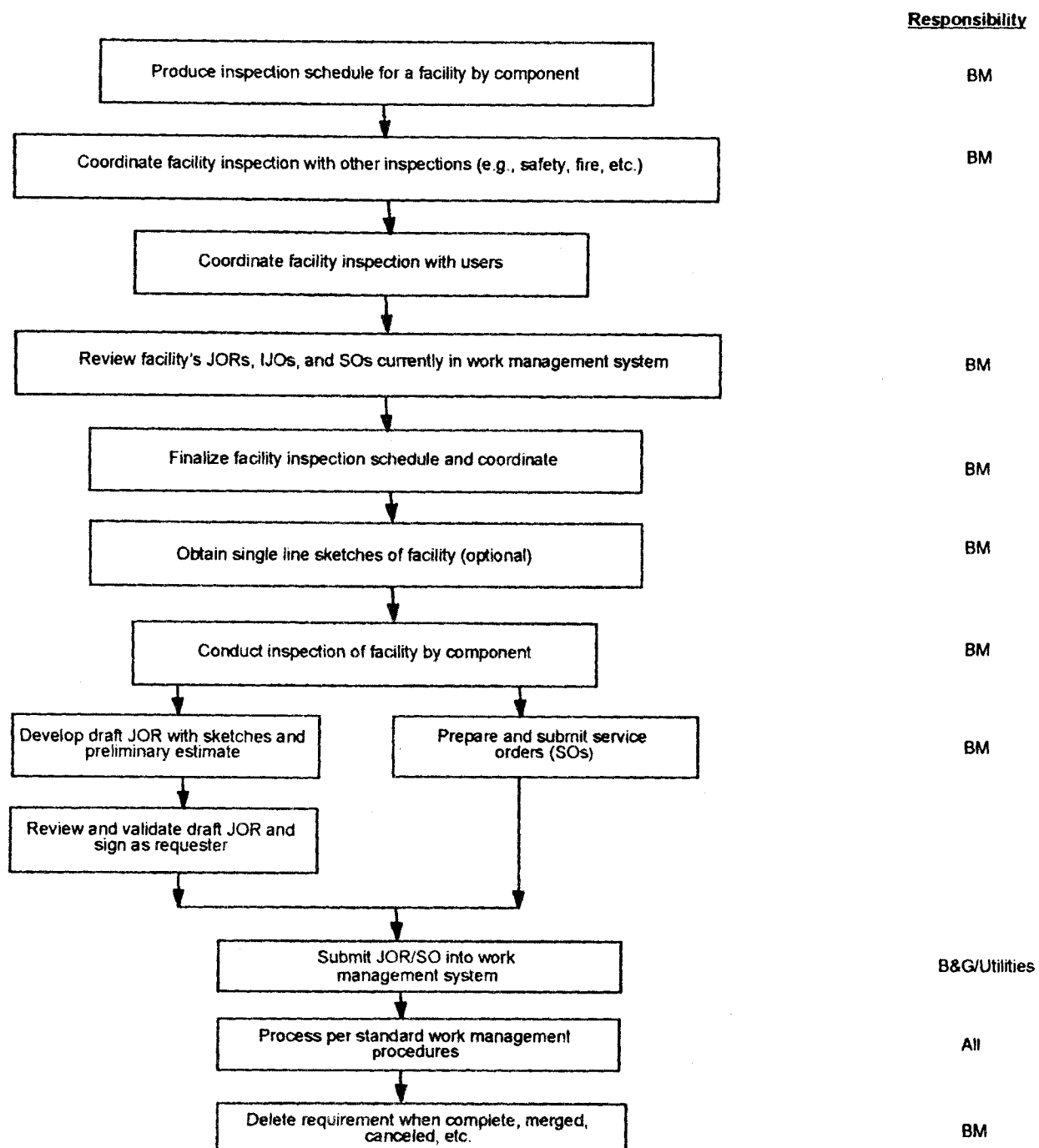


Figure C-1. Component Inspection Flow Process

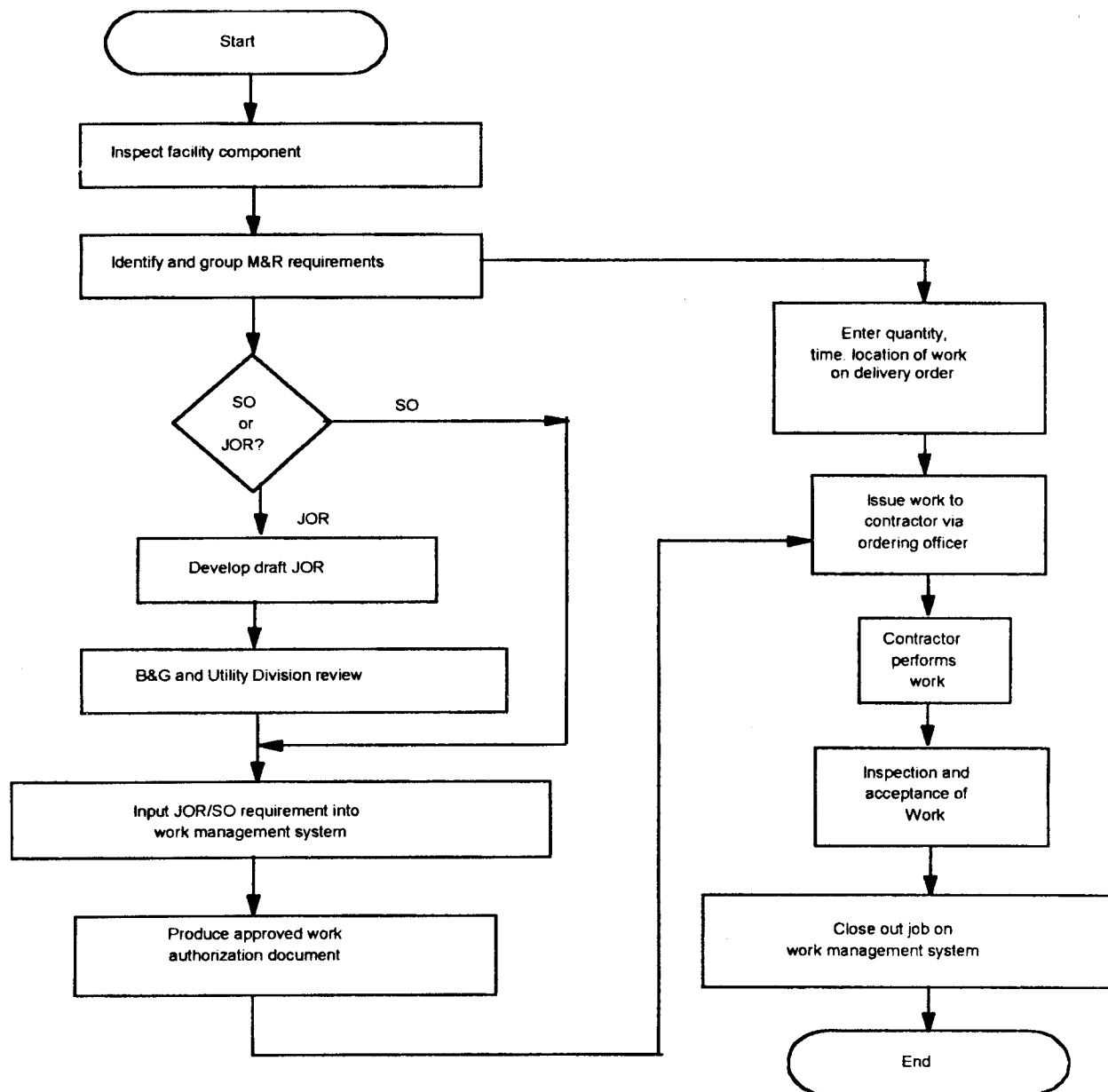


Figure C-2. Flow Process for Direct Input of Component Inspection into requirements-Type Contract

Appendix D Engineered Performance Standards

D-1. Overview

Engineered Performance Standards (EPS) are an accurate and readily available source of time standards for planning, scheduling, and measuring the performance of real property maintenance work. EPS are also acceptable for establishing methods and standards programs. The benefits of using EPS are improved productivity of the work force engaged in maintenance and repair; a fair, efficient method of work control; a maximum return for resources expended (labor-hours, materials, and dollars); and improved job planning. These benefits result from relieving shop supervisors of administrative details that interfere with direct supervision of the maintenance work force.

D-2. EPS development and facilities engineering work measurement

a. EPS specify the labor-hours required to accomplish a certain

unit of work at an acceptable level of quality. EPS represent the labor-hours it should take a trained worker, or a group of trained workers to produce a unit of work, according to a specified method, under specific working conditions. They are derived from complete, objective analysis, and measurement of each task. EPS are designed primarily for maintenance and repair work and cover most shops' workloads. Statistical standards are based on statistical analysis of past performance data. Technically qualified estimates are based on a detailed analysis forecast by technically qualified individuals. EPS may be used on all work for which there is an applicable standard.

b. The EPS system is based on sound industrial engineering principles that have been simplified for application in the maintenance and repair field. Many maintenance and repair projects appear complex when looked at as a whole. Analysis is simplified when a project is divided into basic tasks, subdivided into operations, and further subdivided into work elements. These can then be measured through application of improved industrial engineering techniques,

such as predetermined time standards and time studies. Application of EPS begins at this point.

D-3. Basic task elements

Planners and estimators need to know the following basic task elements.

a. Productive or actual work. This is any work that alters the composition, condition, or construction of the item or area being repaired. Examples are sawing timber, tightening screws, measuring a 2 x 4 to length, or securing an electric wire in a junction box. Actual work or craft time is that time required to perform a task. The task area is divided into the type of work performed by a craft (i.e., carpentry, electrical, plumbing, painting, and so forth). Tasks are arranged in groups of comparable work content, and an average time is assigned each task craft area (type of work performed by a craft).

b. Indirect productive. This category covers work performed that renders services for the productive portion of the job. It is that necessary work that does not alter the composition, condition, conformation, or construction of the product. It includes the following:

(1) Job preparation. Job preparation involves work or time expended by the craftsmen for receiving job assignments; receiving instructions from a supervisor; planning equipment requirements; gathering tools, materials, and equipment; or setting up at the job site. Also included is that time required for securing tools, materials, and equipment at the beginning and end of the day, or upon completion of the job.

(2) Planning. Planning represents time spent by the craftsman to determine a course of action to be followed for accomplishing a job, such as studying blueprints or computing dimensions.

(3) Material handling. Material handling covers work connected with the handling of material for a job, either at the shop or in the vicinity of the job site. Materials for a job should be drawn from the self-service store or the warehouse. Material handling is included in the craft time allowance standard for service orders. Supplies for individual jobs should be delivered to the job site or stored in a warehouse bin or holding area where they can be easily picked up by the craftsmen. Normally such work is assigned as a requirement to the lead shop and is indicated on the individual job order. Any additional material handling requirements must be added as a separate task on the craft's Job Phase Calculation Sheet.

(4) Travel. Travel is the time required to get to and from a job. It is often a significant factor contributing to the total time needed to complete a project. It includes vehicular time and an incremental time necessary for walking between the vehicle and the job site.

(5) Balancing delay. Balancing delay occurs when one craftsman must wait while another, continually occupied, finishes an operation. Examples are when a craftsman is waiting for a second craftsman to bring a bucket of tar, or when the helper of a two-person working party is waiting for the supervisor to finish giving instructions to the craftsman.

c. Nonproductive. This category covers idle or personal time spent by the craftsman that does not contribute directly or indirectly to altering the composition, condition, conformation, or construction of the item or area being repaired or altered. It includes the following.

(1) Craft allowances. These are combined and applied to the craft time as a percentage factor.

(2) Personal time. This is expended by the craftsman that is nonproductive and serves to satisfy his or her personal needs. Examples include smoking a cigarette during a period when productive work could be performed, coffee breaks, rest periods, cleanup, and similar requirements.

(3) Unavoidable delay. This is idle time spent by the craftsman resulting from factors not under his or her control. Examples include power and equipment failures, materials and tools not delivered to the site, and painters' work interrupted by weather.

(4) Official. This refers to any planned interruption in the workday that removes the craftsman from his or her particular job for reasons endorsed by management. Examples include attending

safety meetings, visiting blood banks, and other planned interruptions.

D-4. Determination of job phases and craft phases

A job phase, or craft phase, is a group of tasks that can be accomplished during an uninterrupted period of work by one craft. Planners/estimators must use logic in phasing shop sequence and the job phases. A DA Form 2764 (The Job Planning Worksheet) is prepared for each job phase. The job phase description must be adequate, since it contains the information that shop foremen use in planning. While shop supervisors may rearrange the sequence (tasks), they are guided by the time allowed for that job phase. Therefore, tasks must also be shown as a logical sequence of events in the job phase description.

Appendix E

Eligibility and Evaluation Criteria for the William C. Gribble, Jr., DPW Executive of the Year Award

E-1. Eligibility criteria

This award recognizes managerial excellence at the highest levels of installation DPW management. Individuals should meet the following criteria:

a. Served in one of the following capacities at an Army installation level activity:

(1) Director of Public Works.

(2) Deputy Director of Public Works.

(3) Director of Facilities Engineering.

(4) Deputy Director of Facilities Engineering.

(5) Equivalent facilities engineering position at the chief or deputy chief level, however titled, with the scope of responsibilities for providing full RPMA management support at an Army installation.

b. Service must have been performed for a minimum of 24 months in one of the above, or a combination of the above positions. The 24-month minimum period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required. Civilian candidates for this award should have been rated "highly successful" or "exceptional" for this period of service.

E-2. Evaluation criteria

The nomination should highlight demonstrated managerial excellence on the part of the nominee which has resulted in an exceptional level of DPW mission accomplishment. The nomination format provided in appendix N must be used. The following areas are recommended for evaluating candidates:

a. Customer satisfaction.

b. Innovations or achievements in improving work productivity.

c. Accomplishing responsibilities of DPW support which result in consistently high quality and which measurably exceed quality control standards.

d. Increasing employee productivity and improving manpower utilization.

e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.

f. Significant individual or group accomplishments involving occupational safety and health, development of the workforce (Equal Employment Opportunity (EEO), Incentive Awards, Training, and so forth), mission-support activities, and other assigned activities.

g. Exceptional contribution to the Army's Communities of Excellence Program.

h. Fixed facilities energy consumption: million British Thermal Unit per square foot (MBTU/SF) versus fiscal year (FY) goal in MBTU/SF.

i. Ability to develop, influence, integrate, and manage the RPMA program.

j. Use of installation planning and programming documentation, including master plans, natural resources plans, historical preservation programs, fixed facilities energy conservation plan, annual

work plans, resources management plans, Military Construction, Army (MCA) documents, and project development brochures.

- k. Exceptional fixed facilities energy conservation plan.
- l. Ability to respond to changes in installation mission priorities.
- m. Support of and involvement in the EEO program.
- n. Implementation of innovative management procedures.
- o. Accuracy of automation data bases.
- p. Commitment to protecting the environment.

Appendix F Eligibility and Evaluation Criteria for the DPW Engineering, Plans, and Services Executive of the Year Award

F-1. Eligibility

This award recognizes managerial excellence in the DPW Engineering, Plans and Services (EP&S) function at the installation level and recognizes the responsibilities involved in successfully integrating engineering design, engineering services, project execution, master planning, and real property management support functions. Individuals should meet the following criteria for nomination:

a. Served in one of the following capacities at an Army installation level activity:

- (1) Chief, Engineering, Plans, and Services function.
- (2) Chief, Engineering Design function.
- (3) Chief, Engineering Services function.
- (4) Chief, Master Planning function.
- (5) Chief, Contract Administration function.
- (6) Equivalent engineering, plans, and services function with tasks that meet the evaluation criteria.

b. Service must have been performed for a minimum of 24 months in one of the above, or a combination of the above positions. The 24-month minimum period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

F-2. Evaluation criteria

The nomination package should highlight managerial excellence which resulted in an exceptional level of accomplishment of engineering plans and services activities. The format in Appendix N must be used for all nominees. The following general areas are recommended for consideration:

- a. Maintaining a high level or improving customer satisfaction.
- b. Significant management innovations or achievements in improving work productivity by reference to work measurement or other workload data.
- c. Accomplishing responsibilities of the Engineering Plans and Services function resulting in consistently high quality products.
- d. Significantly increasing employee productivity, reducing labor costs, and/or improving manpower utilization.
- e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.
- f. Number/dollar value of projects designed in-house.
- g. Number/dollar value of projects designed by architect-engineers.
- h. Number/dollar value of contracts awarded for projects.
- i. Number/dollar value of contracts managed for projects.
- j. Dollar value of service contracts managed.
- k. Dollar value of change orders for projected designed in-house.
- l. MCA program profile (current FY - 2 years) (5-year profile).
- m. Other construction funds program profile (current FY - 2 years).
- n. Master plan documentation completeness, (Phases I, II, III) and accuracy.
 - o. Substantial cost savings or value engineering.
 - p. Quality, completeness, and effective use of installation master plan.

q. Exemplary construction management and contract warranty program.

- r. Effective designs and definition of program requirements.
- s. Quality MCA program development.

Appendix G Eligibility and Evaluation Criteria for the DPW Business Management Executive of the Year Award

G-1. Eligibility criteria

This award recognizes managerial excellence in the DPW Business Management function at the installation level and recognizes the complex activities and responsibilities involved in successfully integrating requirements, plans, and programs into effective execution efforts. Individuals should meet the following criteria.

a. Served in one of the following capacities at an Army installation level activity:

- (1) Chief, Business Management function
- (2) Chief, Engineer, Resources Management function.
- (3) Chief, DPW Program and Budget function.
- (4) Chief, Work Coordination function.
- (5) Chief, Management Engineering and Systems function.
- (6) Chief, Work Reception and Scheduling function.
- (7) Chief, Estimating and Facility Inspection function.
- (8) Equivalent engineering or housing business management function.

b. Service must have been performed for a minimum of 24 months in one of the above, or combination of the above positions. The 24-month period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

G-2. Evaluation criteria

The nomination should highlight managerial excellence on the part of the nominee which has resulted in an exceptional level of accomplishment of DPW resources management activities. The following general areas are recommended for evaluating the candidates:

- a. Improved customer satisfaction and relations.
- b. Management innovations or achievements in work productivity.
- d. Increasing employee productivity and reducing labor costs.
- e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.
- f. Dollar cost savings due to study recommendations.
- g. Percent of facilities with completed facilities component inspections.
- h. Average days to process individual job orders.
- i. Percent of space utilization surveys completed.
- j. Implementation, accuracy, and use of DPW automated systems.
- k. Integration of multiple programs (e.g., OMA, OMAR, NAF, AFH, reimbursables) into execution plans such as Annual Work Plans (AWP) and integrated long-term planning tools such as Resource Management Plans.
- l. Savings and cost avoidance.
- m. Ability to manage resources under adverse conditions.
- n. Use of automation to improve RPMA management.
- o. Exceptional real property and space management program.

Appendix H Eligibility and Evaluation Criteria for the DPW Housing Executive of the Year Award

H-1. Eligibility criteria

This award recognizes managerial excellence in the DPW Housing function at the installation level and recognizes the complex activities and responsibilities involved in planning, programming, and

providing adequate housing for accompanied and unaccompanied personnel and their families. Individuals should meet the following criteria:

a. Served in one of the following capacities at an Army installation level activity:

- (1) Chief, Housing function.
- (2) Chief, Family Housing Management function.
- (3) Chief, Unaccompanied Personnel Housing Management function.
- (4) Chief, Housing Program and Budget function.
- (5) Chief, Housing Furnishings Management function.
- (6) Equivalent housing support function.

b. Service must have been for a minimum of 24 months in one of the above, or a combination of the above positions. The 24-month period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

H-2. Evaluation criteria

The nomination for this award should highlight demonstrated managerial excellence on the part of the nominee which has resulted in an exceptional level of accomplishment of housing support activities. The nomination format provided in appendix N must be used for all nominees for this award. The following general areas are recommended for evaluating candidates:

- a. Improving customer satisfaction and relations.
- b. Improving work productivity.
- c. Accomplishing Housing functions in consistently high quality manner.
- d. Increasing employee productivity and reducing labor costs.
- e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.
- f. Number of General and Flag Officer Quarters supported.
- g. Housing acquisition program profile, the "Deficit Reduction Plan"(current year + years and 5-year profile).
- h. Family housing whole house renewal program profile (current year + 4-years and 5-year profile).
- i. Installation Family Housing Appropriation program budget.
- j. Number of unaccompanied personnel housing spaces available.
- k. Quarters utilization.
- l. Housing referral program.
- m. Housing NAF program dollars.
- n. Exemplary construction or housing renovation program.
- o. Studies that resulted in tangible savings and cost avoidance.
- p. Implementation of the Family Action Plan/Theme Support Plan.

Appendix I Eligibility and Evaluation Criteria for the DPW Operations and Maintenance Executive of the Year Award

I-1. Eligibility criteria

This award recognizes managerial excellence and productivity in the DPW Operations and Maintenance function at the installation level and recognizes the complex activities and responsibilities involved in planning, programming, and executing the engineering operations, maintenance, and repair mission of the DPW. Individuals should meet the following criteria.

a. Served in one of the following capacities at an Army installation level activity:

- (1) Chief of a Building and Grounds function.
 - (2) Chief of a Utilities function.
 - (3) Chief of a Hospital Support function.
 - (4) Chief of an Engineering Operations and Maintenance function.
 - (5) Equivalent operations and maintenance support function.
- b. Service must have been for a minimum of 24 months in one of

the above, or a combination of the above positions. The 24-month period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

I-2. Evaluation criteria

The nomination should highlight managerial excellence on the part of the nominee which has resulted in an exceptional level of accomplishment of DPW operations and maintenance activities. The nomination format provided in appendix N must be used for all nominees for this award. The following general areas are recommended for evaluating candidates:

- a. Improving customer satisfaction and relations
- b. Improving work productivity
- c. Accomplishing operations and maintenance function in a high quality manner.
- d. Increasing employee productivity and reducing labor costs.
- e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.
- f. Utilities plant operating efficiencies.
- g. Utilities annual consumption/operating budget (breakout as appropriate).
- h. Grounds, roads, railroads base data.
- i. Energy conservation initiatives.
- j. Workforce productivity and high morale.
- k. Innovative management resulting in savings and cost avoidance.
- l. Effective use of automation resulting in improved RPMA management.
- m. Innovative maintenance and repair techniques.

Appendix J Eligibility and Evaluation Criteria for the DPW Support Executive of the Year Award

J-1. Eligibility criteria

This award recognizes managerial excellence and productivity in a DPW support function at the installation level and recognizes the complex activities and responsibilities involved in supporting engineering operations, and the maintenance and repair mission of the DPW. Individuals should meet the following criteria.

a. Served in one of the following capacities at an Army installation level activity:

- (1) Chief of an Environmental function.
- (2) Chief of a Fire Protection function.
- (3) Chief of an Energy Conservation function.
- (4) Chief of an Engineering Supply and Storage function.
- (5) Equivalent operations and maintenance support function.

b. Service must have been for a minimum of 24 months in one of the above, or a combination of the above positions. The 24-month period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

J-2. Evaluation criteria

The nomination should highlight demonstrated managerial excellence on the part of the nominee. The format provided in Appendix N must be used. The following general areas are recommended for evaluating candidates:

- a. Improving customer satisfaction and relations.
- b. Improving work productivity.
- c. Accomplishing the DPW support function in a high quality manner.
- d. Increasing employee productivity and reducing labor costs.
- e. Developing projects or programs that are accepted for installation DPW, MACOM, or Army implementation.
- f. Significant individual or group accomplishments involving occupational safety and health, developing of the workforce (Equal

Employment Opportunity, Incentive Awards, Training, and so forth), mission-support activities, and other assigned activities.

g. Resource Conservation Recovery Act and Hazardous Waste program profile (current year + 2 years and 5-year profile).

h. Historical Preservation Program profile (current year + 2 years and 5 year profile).

i. Fixed facilities energy consumption MBTU/SF (actual versus goal).

j. Fire loss (dollars/number of injuries).

k. Supply and storage base data, such as dollar value and number of line items managed.

l. Savings and cost avoidance.

m. Energy management program that allowed installation to exceed fixed facilities energy conservation goals.

n. Exemplary fire protection programs as evidenced by minimal fire losses and full community involvement in the fire protection program.

o. Exceptional supply support activity.

Appendix K Eligibility and Evaluation Criteria for the DPW MACOM Support Executive of the Year Award (Individual)

K-1. Eligibility criteria

This award recognizes managerial excellence within the Major Army Command (MACOM) or Major Subordinate Command (MSC) and recognizes the complex tasks involved in integrating requirements, plans and programs, project execution and master planning support. Individuals should meet the following criteria.

a. Served in one of the following capacities at a MACOM or MSC:

- (1) Facilities.
- (2) Business Management.
- (3) Housing.
- (4) Master Planning.
- (5) Installation Support.
- (6) Environmental.
- (7) Equivalent engineering or housing support function.

b. Service must have been for a minimum of 24 months in one of the above, or a combination of the above functions. The 24-month minimum period must be completed by the initial nomination submission due date. For military personnel, a minimum service period is not required.

K-2. Evaluation criteria

The nomination should highlight demonstrated managerial excellence on the part of the nominee resulting in an exceptional level of MACOM or MSC support to the installation DPW. The format provided in appendix N must be used. The following general areas are recommended for evaluating candidates:

a. Quality and responsiveness of management support to the installation DPW

b. Innovations resulting in significant improved in DPW support.

c. Effective use of resources to assist installation DPW mission.

d. Management improvements to enhance customer satisfaction.

e. Number of years of RPMA management support to installations

f. Trends in DPW productivity.

g. Trends in resources.

h. Implementation and use of DPW automated systems.

i. Cost savings due to implemented recommendations.

j. Number/dollar value of projects/installation support.

k. Number/dollar value of contracts managed for installation support.

m. Quality of management support provided installation.

n. Responsiveness to critical installation requirements.

o. Comprehensive planning, programming, or execution support.

p. Comprehensive short-term and long-term programs.

q. Comprehensive support for activity career program managers, and initiatives to enhance recruitment, development, and retention of DPW professionals.

Appendix L Eligibility and Evaluation Criteria for the Installation Support Program of the Year Award

L-1. Eligibility criteria

This award recognizes Corps of Engineers support to the installation RPMA mission. Eligibility is restricted to U.S. Army Corps of Engineers Districts, Operating Divisions, and Separate Field Operating Activities (U.S. Army Construction Engineering Research Laboratory, U.S. Army Center for Public Works, U.S. Army Cold Regions Research and Engineering Laboratory, U.S. Army Engineering Waterways Experiment Station) that provide support to installation-level DPW activities. This award recognizes support to the installation DPW's operation, maintenance, and repair mission and military construction program.

L-2. Evaluation criteria

The nomination for this award should highlight exceptional RPMA support to Army installations by USACE activities. The format for corporate awards (Appendix N) must be used. Installation DPWs may nominate USACE activities for this award and USACE activities may nominate themselves. A USACE self-nomination must include endorsements from the DPW featured in the package and from that DPW's MACOM. MACOMs should also review all nominations for this award to determine whether a single USACE activity has received more than one nomination. In such a case, a MACOM should combine all nominations into a single submittal to ensure the nominee has received full recognition for support rendered to all the MACOM's installations. The following areas are recommended for evaluating candidates:

a. Quality and responsive support to installation DPW mission.

b. Innovative changes resulting in improved DPW mission accomplishments.

c. Value of RPMA and NAF projects designed and managed for installations.

d. Value of change orders for RPMA projects designed for installations.

e. Value of support provided to an installation to include specific reimbursable orders.

f. Dollar value of contracts awards for installation projects.

g. Dollar value of contracts managed for the supported installation.

h. Quality of project design.

i. Responsiveness to critical requirements and time constraints.

j. Quality master planning support and mobilization planning support.

k. Special technical studies (Examples: environmental quality, energy conservation, environmental impacts, historical preservation, structural analysis, boiler water analysis, electrical system studies, pavements and railroads).

l. Contracting support for projects and services.

m. Support of installation automation needs to improve RPMA management.

n. Quality installation Military Construction (MILCON) program development (that is, DD Forms 1391 and project development brochures).

Appendix M Eligibility and Evaluation Criteria for the DPW Support Contractor of the Year Award

M-1. Eligibility criteria

This award recognizes excellence in contractual accomplishment of an installation's DPW mission. Eligibility is restricted to contractors providing extensive base operations (BASOPS) support to an Army installation including all or part of the engineering, housing operations, RPMA, environmental, or engineering support functions. For service, operations, maintenance, or engineering support type contracts, contractors must have provided continuous support for at least 18 months. For project type work, contractors must have accomplished at least three projects within the preceding 3 years before the service can be recognized. Contractors providing full installation BASOPS support should be nominated for that portion of support provided to the engineering and housing mission. Installations are limited to a single nominee.

M-2. Evaluation criteria

The nomination should highlight exceptional DPW support provided to Army installations by contractors. The nomination format for corporate awards, provided in appendix N, must be used for all nominees for this award. The following areas should be considered:

- a. Customer satisfaction and customer relations.
- b. Management innovations.
- c. Quality and responsiveness of DPW support.
- d. DPW functions performed by the contractor
- e. Dates of current contract performance period.
- f. Options for extension of current contract.
- g. Size of contractor's DPW workforce.
- h. Non-DPW services provided to the installation.
- i. Type of contract.
- j. Number of years of satisfactory support to the installation.
- k. Exceptional cooperation between contractor and Government managers
- l. Substantial cost savings and cost avoidance.
- m. Exemplary integration of contractual support into the total DPW mission.

Appendix N

DPW Annual Awards Program Nomination Format

N-1. General

submit nomination through command channels in an original and two copies. Nomination must be endorsed by the installation commander. Self-nominations for the Installation Support Program of the Year Award must be endorsed by the MACOM commander.

N-2. Format of nomination for individual awards

a. Part I. Administrative/Installation Data (may not exceed one page).

- (1) Award for which being nominated: (Required.)
- (2) Nominee data: (Required.)
 - (a) Name/Grade.
 - (b) Position title and time in position (years and months).
 - (c) Organization (for example, EPSD, DPW Directorate, and so forth).
- (3) Installation base data: (These data are optional.)
 - (a) DPW name/telephone number.
 - (b) Installation primary mission.
 - (c) Installation population supported.
 - (d) Installation square footage of building facilities.
 - (e) Installation number of family housing units.
 - (f) Installation RPMA budget (current year/prior year)
 - (g) Size of budget managed by nominee (current year/prior year).
 - (h) Total size of workforce managed by nominee.
 - (i) Previous DPW experience (position + years/months).
 - (j) Installation RPMA workforce (in-house and contract).

b. Part II. Award Evaluation Data (may not exceed three pages). Describe how the nominee excelled in managing.

N-3. Format of nomination for installation support program and corporate awards

a. Part I. Administrative/Installation Data: (may not exceed one page)

- (1) Award for which being nominated. (Required.)
- (2) Corporate data. (Required.)
 - (a) Activity name.
 - (b) Activity manager's name/grade (if applicable), position.
 - (c) Scope of RPMA support provided (e.g., full RPMA support).
 - (d) Supported installation's name.
- (3) Installation base data: (These data are optional to nominations.)
 - (a) DPW name and telephone number.
 - (b) Installation's primary mission.
 - (c) Installation's population supported.
 - (d) Installation square footage of building facilities.
 - (e) Installation RPMA budget (current year/prior year).

b. Part II. Award Evaluation Data (may not exceed three pages). Describe specifically how the nominated activity excelled in support or productivity.

Appendix O

DPW Annual Awards Program Selection Process and Procedures

O-1. Selection process and procedures

The MACOMs have maximum influence in selection of the winners. MACOMs should establish an award evaluation committee. The size, makeup, and procedures under which the committee evaluates nominees are left to the discretion of each MACOM. This committee will evaluate not only the MACOM's candidates but also the top candidates from all other MACOMs. MACOMs should ensure there is appropriate expertise for each award.

O-2. Evaluation process

The steps in the award evaluation and selection process are as follows:

a. Installations and USACE activities prepare and submit nominations as described in appendix E-through N. The U.S. Army Center for Public Works will announce the date by which nominations must arrive at CPW.

b. Upon receipt of nominations, each MACOM will evaluate and select the MACOM candidates for each award. Nominations for the Installation Support Program of the Year Award should include information from all installations supported. The nomination package for each MACOM nominee will be forwarded to CPW, ATTN: CECPW-FT, Fort Belvoir, VA 22060-5516. MACOMs may add supplemental justification for each nominee.

c. CPW will consolidated the packages for each category of award. The consolidated packages will include all supporting documentation for each MACOM nominee and will be forward to the MACOMs for their final evaluation.

d. MACOMs will rank order the Army nominees for each award evaluation. MACOMs will exclude their own nominees from this ranking process. This ranking will serve as the primary basis for ultimate selection of the award winner for each category. MACOMs will forward their rank orders to CPW. MACOMs may submit a short and concise explanation of its ranking process. This information will be used if necessary to break ties among nominees.

e. CPW will compile the MACOM rankings for the nominees for each award. Each MACOM's top-ranked nominee in each award category will be awarded one point, the second-ranked nominee will be awarded two points, and so on until all of the nominees in each category have been scored. CPW will total the points awarded to each nominee. The nominee in each award category receiving the lowest score will be selected the winner for that award. Final decisions in case of ties will be made by the CPW.

Glossary

Section I Abbreviations

AAFES

Army and Air Force Exchange Service

ABC

Activity Based Costing

AE

Architect Engineer

AFH

Army Family Housing

AMC

Army Materiel Command

AMSCO

Army Management Structure Code

APC

Account Processing Code

AR

Army Regulation

ARR

Annual Recurring Requirements

AWP

Annual Work Plan

B&G

Buildings and Grounds

BASOPS

Base Operations

BES

Budget Estimate Submission

BM

Business Management

BMB

Business Management Branch

BMD

Business Management Division

BMG

Budget Manpower Guide

BOM

Bill of Materials

BRAC

Base Realignment and Closure

CA

Commercial Activities

CERCLA

Comprehensive Environmental Response,
Compensation, and Liability Act

CONUS

Continental United States

COR

Contracting Officer Representative

COTR

Contracting Officer technical Representative

COTS

Commercial Off The Shelf Software

CPAF

Cost-Plus, Award-Fee

CPW

Center for Public Works

DA

Department of the Army

DBOF

Defense Business Operations Fund

DBP

DPW Business Plan

DeCA

Defense Commissary Agency

DECAS

Defense Commitment Accounting System

DERA

Defense Environmental Restoration Account

DERP

Defense Environmental Restoration Program

DFAS

Defense Finance and Accounting Service

DIS

Director of Installation Services

DHP

Defense Health Program

DoD

Department of Defense

DOIM

Directorate of Information Management

DPTM

Directorate of Plans, Training, and
Mobilization

DPW

Directorate of Public Works

DRM

Directorate of Resource Management

EA

Environmental Assessment

ECAP

Environmental Compliance Achievement
Program

ECIP

Energy Conservation Investment Program

EIS

Environmental Impact Statement

EMS

Engineered Management Systems

EOR

Element of Resource

EPA

Environmental Protection Agency

EP&S

Engineering, Plans, and Services

EPS

Engineered Performance Standards

EPSD

Engineering, Plans, and Services Division

FAD

Funding Authorization Document

FUDS

Formerly Used Defense Sites

FY

Fiscal Year

GFOQ

General and Flag Officer Quarters

GIN

Governmental in Nature

GOCO

Government-Owned, Contractor-Operated

GSA

General Services Administration

HQDA

Headquarters, Department of the Army

I-EIS

Installation--Executive Information System

IFS-M

Integrated Facilities System, Mini/Micro

IJO

Individual Job Order

IPB

Installation Planning Board

IRP

Installation Restoration Program

ISA

Installation Support Agreement

ISR

Installation Status Report

ITAM

Integrated Training Area Management

JOR

Job-Order Request

L&E
Labor and Equipment

LRWP
Long Range Work Plan

MACOM
Major Army Command

M&R
Maintenance and Repair

MCA
Military Construction, Army

MILCON
Military Construction Program

MIPR
Military Interdepartmental Purchase Agreement

MWR
Morale, Welfare, and Recreation

NAF
Nonappropriated Funds

NEPA
National Environment Policy Act

O&M
Operations and Maintenance

OCONUS
Outside CONUS

OMA
Operations and Maintenance, Army

OMB
Office of Management and Budget

OMD
Operations and Maintenance, Defense

OSD
Office of the Secretary of Defense

PA
Procurement, Army

PAVER
Pavement Maintenance Management System

PBAC
Program Budget Advisory Committee

PCN
Production Control Number

PM
Preventive Maintenance

POM
Program Objective Memorandum

PPBS
Planning, Programming, and Budgeting System

PPBERS
Planning, Programming, Budgeting, Execution and Review System

PWS
Performance Work Statement

QA
Quality Assurance

QAE
Quality Assurance Evaluator

QC
Quality Control

QWS
Quarterly Work Schedules

R&A
Review and Analysis

RCRA
Resource Conservation Recovery Act

RDTE
Research, Development, Test, and Evaluation

REC
Record of Environmental Consideration

RMP
Resource Management Plan

ROD
Record of Decision

RMAT
Real Property management Tool

RPMA
Real Property Maintenance Activity

RPMP
Real Property Master Plan

SAACONS
Standard Automated Contracting System

SARA
Superfund Amendments and Reauthorization Act

SDS
Standard Depot System

SES
Shared Energy Savings

SIFS
Standard Industrial Fund System

SO
Service Order

SOMARS
Standard OMA Requirements System

SOO
Standing Operations Orders

SOP
Standard Operating Procedures

SOW
Statement of Work

SQL
Structured Query Language

STANFINS
Standard Army Finance System

STAMIS
Standard Army Management Information System

STARFIARS
Standard Army Financial Inventory Accounting Report System

TA
Type Action

TAP
The Army Plan

TB
Technical Bulletin

TDA
Table of Distribution and Allowances

TDAC
Technical Data Activity Code

TDR
Technical Data Feeder Report

TEAM-UP
Test and Evaluation Army Management - Uniform Program

TM
Technical Manual

UPS
Unit Price Standards

USACE
U.S. Army Corps of Engineers

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This section contains no entries.

**Section III
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